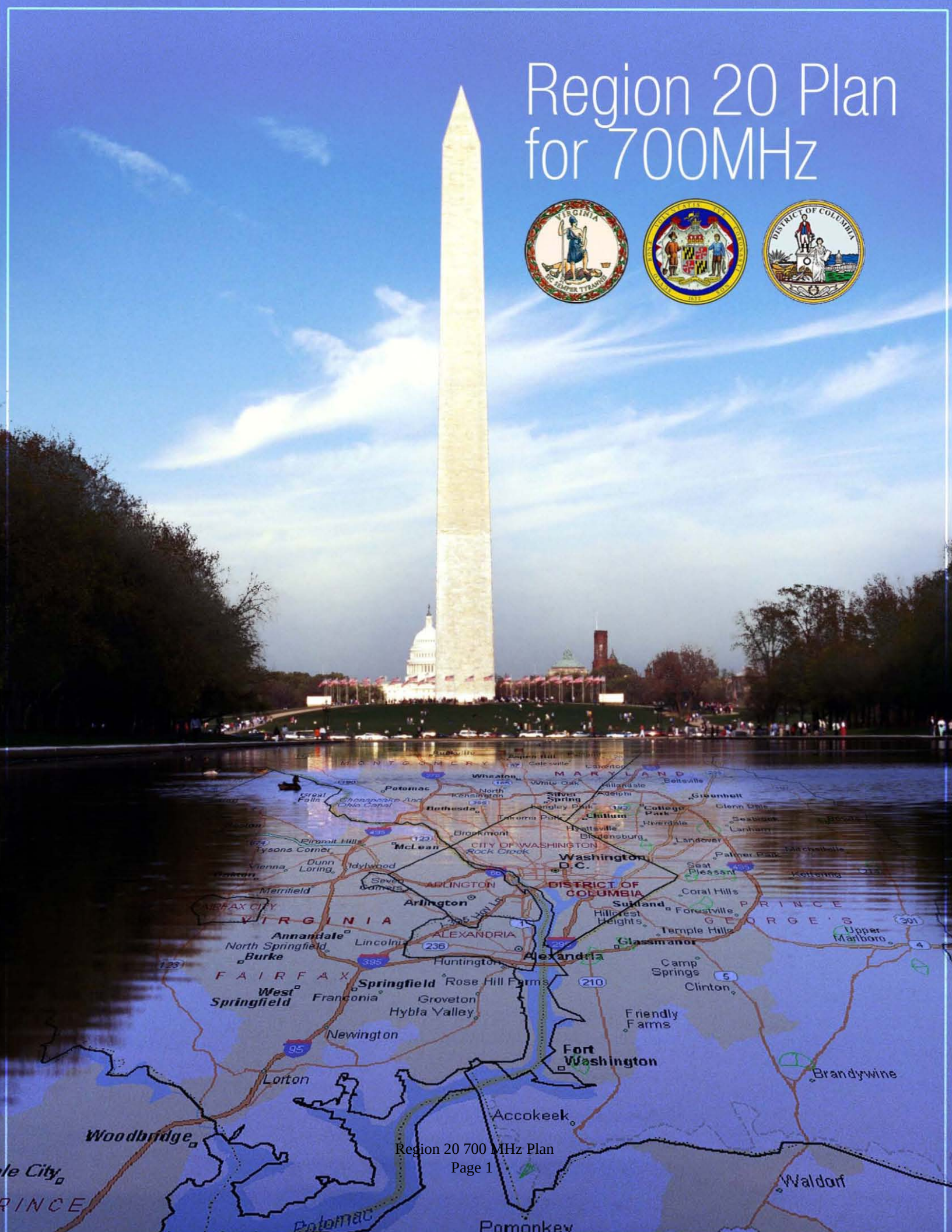
Region 20 Plan for 700MHz



August 29, 2007

Mr. Derek Poarch
Chief, Public Safety and Homeland Security Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Subject: WTB Docket No. 02-378, Region 20 - 700 MHz Regional Plan
Amendment as Required by the Second Report and Order

Dear Mr. Poarch:

Regional Planning Committee (RPC) Twenty submitted the Plan for 700 MHz to the Federal Communications Commission for review and approval in June of 2007. On July 31, 2007, the Commission adopted the Second Report and Order to Docket WT 96-86. The Report and Order was released to the public on August 10, 2007. In ¶346 of the Second Report and Order, the Commission stated:

"***RPC plans*** already approved or ***on file with the Commission will require amendment*** (emphasis added). We find that the substantial benefits resulting from accommodating broadband communications and consolidating the narrowband channels outweigh the near-term concerns of RPCs. Indeed, the fact that the narrowband consolidation will optimize the 700 MHz public safety band plan as a whole, and promote the deployment of new technologies and broadband services, will be to the advantage of the very RPCs whose current plans will be impacted. Accordingly, ***we require all RPCs with*** approved plans or ***plans on file to submit amended plans consistent with the decisions herein within 30 days*** of the effective date of this Second Report and Order (emphasis added)."

Pursuant to the provisions of ¶346 of the Second Report and Order, the 700 MHz Plan for Regional Planning Committee Twenty has been revised. The revisions were presented to the Region's members at August 29, 2007 meeting and adopted. Plan updates are printed in italicized blue for the convenience of the Commission's reviewers.

Sincerely,

G. Edward Ryan, II

G. Edward Ryan, II, Chairperson of Regional Planning Committee 20
Department of Natural Resources
580 Taylor Avenue, E-4
Annapolis, MD 21401
P: 410-260-8734
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E: gryan@dnr.state.md.us

Request for Waiver

Waiver #1

Region 20 requests a waiver of 47 CFR §90.527 (a)(5) which requires that written consent be obtained from all adjacent 700 MHz Regional Planning Committees. The Regions to which Region 20 is adjacent and the status of that Region's 700 MHz RPC is shown in the following table:

Region #	RPC Status	Consent Obtained
Region #28	Formed	Yes
Region #42	Formed	Yes
Region #44	Formed	Yes
Region #36	Unformed	No

Region 20 has made every reasonable effort to contact and obtain the consent of all adjacent Regions. Region 20 has received consent from all adjacent 700 MHz RPCs except for Region 36, which is unformed as evidenced by an email from the Convener on June 30, 2006, confirming that Region 36 has not yet convened.

Region 20 has placed an Adobe Acrobat File containing its 700 MHz Regional Plan on the CAPRAD database where Region 36 members can view it once it convenes. Region 20 has also provided a copy of its Regional Plan to the convener of Region 36.

Region 20 respectfully requests that the Commission waive the provisions of 47 CFR §90.527 (a) (5) (signed consent and a signed Inter-Regional Dispute Resolution Agreement) with respect to coordination with Regional Planning Committee 36.

Respectfully submitted,

G. Edward Ryan, II

G. Edward Ryan, II, Chairperson of Regional Planning Committee 20
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Chair, Region 20

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1.0 700 MHz Regional Plan for Regional Planning Committee 20

This document is the 700 MHz Plan for Regional Planning Committee 20 (District of Columbia, Maryland, and Northern Virginia) describing how the General Use frequencies, as described in 47 CFR §90.531(b)(6) will be allocated and implemented in the Region. This section is provided in compliance with 47 CFR §90.527 (a)(1).

The Region 20 Plan has been updated pursuant to ¶346 of the Second Report and Order, Docket WT 96-86, reviewed by the Region's members, and returned to the Commission within thirty (30) days as required.

1.1 Regional Chair

The Regional Chairperson of Region 20 is:

G. Edward Ryan, II, Chairman of Region 20 700 MHz Planning Committee
Department of Natural Resources
580 Taylor Avenue, E-4
Annapolis, MD 21401
P: 410-260-8734
F: 410-260-8404
E: gryan@dnr.state.md.us

1.2 Other RPC Officers and full RPC Membership

The Vice Chairperson of Region 20 is Mr. Gary McKelvey. His contact information is below:

Gary P. McKelvey, Vice Chairman of Region 20 700MHz Regional Planning Committee
County of Loudoun, Virginia
41975 Loudoun Center Place
Leesburg, VA 20175
Office: 703-771-5123
Email: gmckelve@loudoun.gov

Secretary for Region 20 is Ms. Maria Perez. The contact information is below:

Maria Perez
Department of Natural Resources
580 Taylor Avenue, E-4
Annapolis, MD 21401

Membership in the Region 20 Regional Planning Committee is open to any interested party. Committee Officer Offices, voting procedures, and membership attendance requirements are listed in the Region 20 Planning Committee bylaws. Appendix A contains the Region 20 bylaws. Appendix B is a list of Region 20's initial members and

their agency affiliation. Appendix B-1 lists the Region's membership at the time in which the Region 20 700 MHz Plan was adopted. Voting and operating procedures are described in the bylaws of this plan. Prior to the first meeting of the 700 MHz Committee, sixty (60) days of notice was provided to all interested parties and all sessions have been open to the public.

1.3 Plan Development and Regional Participation

A 700 MHz Regional Planning Committee convening meeting was held on June 22, 2001. ***Notice of the meeting was posted on the Commission's 700 MHz web page on April 9, 2001, more than sixty (60) days prior to the date of the actual meeting. The meeting was open to the public***.

The Plan was developed following a series of meetings held within Region 20. Meetings were typically preceded by a public announcement on the Commission's 700 MHz Web Page as well as individual emails to existing representatives of Region 20 that had assisted in the development of the RPC for 800 MHz. Including the session in which the RPC was convened, three meetings of the Region 20 were held and the dates of the meetings are included in this Plan (please see Appendix B). Following the initial RPC meetings and multiple meetings of the Region's Technical Committee, a draft of the Region 20 Plan for 700 MHz was distributed to the membership with a request for comments and corrections. The Plan submitted to the Commission follows the meeting process and the comprehensive incorporation of feedback from the Region's members.

1.4 Technical Planning Committee

The Region 20 Plan for 700 MHz was primarily developed by the Region's Technical Committee chaired by Mr. Wayne A. McBride, Deputy Director for Public Safety Communications for Prince George's County, Maryland. The membership of the Technical Committee is provided in Appendix B-2.

1.5 Major Elements of the Plan – from 47 CFR §90.527 (a)(2)

The major elements of the Plan are those required to conform to the requirements of the Commission as contained in 47 CFR §90 Subpart R. Each of the elements as contained in the rules of the Commission is specifically notated in this Plan to facilitate regulatory review. Internally, compliance with the Commission's requirements was assessed utilizing the documentation provided by NPSTC. Appendix K also depicts the Region's compliance with 47 CFR §90.527 (a)(2) by depicting the Plan "check-off" sheet provided by the NCC.

1.6 Opportunities for Participation in the Plan's Development - from 47 CFR §90.527 (a)(2)

Although administratively unplanned, there were two distinctively different periods of Plan development. There were meetings held in 2001, 2002, and 2003 as required by the

Commission's rules; however, regional participation in development of the 700 MHz plan was quite limited and without specific action for the review of the Region.

In 2005, there was renewed interest in development of the Plan and with the Regional Meeting held on March 23, 2006, a Technical Committee was formed and charged with the responsibility to develop a draft Plan for review by the Region. Mr. Wayne McBride, Deputy Director of Public Safety Communications for Prince George's County, Maryland was appointed as Chair of the Technical Committee.

At the March 23 meeting, Chairman McBride re-issued a general call throughout the Region for volunteers to participate in the development of the 700 MHz Plan. Emails were sent to members throughout the Region already participating in other initiatives such as the 800 MHz Rebanding group. Contacts were also extended to related communications groups including the National Capital Region (NCR), Maryland Eastern Shore Interoperability Network (MESIN) and Central Maryland Area Radio Communications (CMARC). A number of Region members participated in one or more Planning Meetings (please see list in Section 1.4 of the Plan).

To facilitate the broadest level of participation, meetings were open to all interested persons through on-site participation or a telecommunications conference bridge. All meetings were open to the public as required by 47 CFR §90.527 (a)(8) and no persons were excluded from any of the meetings.

The Technical Committee held meetings on:

1. March 23, 2006
2. May 27, 2006
3. June 15, 2006
4. June 27, 2006

The minutes for meetings are contained in Appendix D.

2.0 Region 20 Description

Region 20 encompasses the entire state of Maryland, the District of Columbia, and the northern independent cities and counties of the Commonwealth of Virginia. The Region includes the nation's capital and many critical national infrastructure and irreplaceable American sites representing the history of our country. These sites and critical infrastructure facilities are found throughout the Region. A list of critical federal and state facilities would be too great to be included within this document. The most critical facilities include the buildings in the District of Columbia supporting the seat of our national tripartite government. Additionally, a number of vital military and governmental facilities are located within the Region such as the White House, Capitol, Supreme Court Building, Pentagon, Andrews Air Force Base, and Camp David, all strategic national infrastructures. However, for most of the federal facilities in the Region, it will be the first responders of the Region's emergency and law enforcement services that will be initially summoned in the event of an emergency. The scope of federal facilities located in our area likely places a greater emergency support responsibility on the first responders of Region 20 than any other area within the United States.

Unfortunately, the importance, beauty, and grandeur of the nation's capital make the region an attractive as well as proven target of terrorism. On September 11, 2001, first responders from throughout the metropolitan Washington area responded to the Pentagon in northern Virginia when it was viciously attacked by terrorists using a commandeered American Airlines Boeing 757. This national tragedy demonstrated to the Region the critical necessity of public safety communications interoperability.

The Washington metropolitan area draws tourists and governmental leaders from throughout the world. International airports are located in northern Virginia and the suburbs of Baltimore. The role of protecting visitors and the citizens of the nation's capital is primarily vested with federal law enforcement and the Region's first responders, all of whom are associated with the Metropolitan Washington Council of Governments (COG) as well as the federally chartered National Capital Region (NCR). The jurisdictions within the NCR represent over 53% of the population within Region 20.

Within the State of Maryland, only the City of Baltimore is independent from the surrounding county. In the Commonwealth of Virginia, all cities are independent from and not within a county's borders. An alphabetical list of the individual counties and independent cities located in Maryland and the Commonwealth can be found in Appendix C.

Region 20 jurisdictions have a diverse geography along with a varied population base totaling 8,265,054 persons, as estimated by the 2004 US Census (update). Along the Interstate (highway) 95 corridors between the Washington and Baltimore metropolitan areas, there is a large population base found in both urban

and suburban areas. Within the Washington and Baltimore areas, a significant number of temporary guests representing tourists, business leaders, and international dignitaries exist adding to the diversity and complexity of the population base. Other areas of the Region consist of small to moderate concentrated pockets of population surrounded by areas of rural population or large amounts of federal property. There is also is a significant transient population from outside of the Region's normal population base visiting professional sports venues, the beach and scenic waterway areas of the District of Columbia and Maryland. As an example, FedEx Field in Prince George's County is the largest National Football League stadium in the United States.

Portions of the Region including Maryland's Eastern Shore and mountainous areas in the west may vary from rural farmland to tourist destinations. There are 12,069 square miles in Region 20. These diverse demographics, combined with the RF propagation difficulties associated with the terrain, engender a challenge by limiting frequency allotments.

Region 20 is adjacent to the following regions:

Region 28	Delaware, southern New Jersey, and eastern Pennsylvania
Region 36	Western Pennsylvania
Region 42	Commonwealth of Virginia
Region 44	State of West Virginia

In the 700 MHz band, allotments for narrowband channels have been generally, but not identically developed based on the CAPRAD database which considers population densities including those of the adjacent Regions. Due to the fact that many of the Region 20 members have already developed trunked radio systems in the 800 MHz frequency band, it is anticipated that the majority of requests for voice/data 700 MHz spectrum will be found in jurisdictions desiring to develop new state-of-the-art and spectrally efficient trunked or wide/broadband radio systems.

These channels will be allocated to the eligible first responder and other authorized agencies in Region 20 as identified in this Plan. Eligible agencies included, but are not limited to, law enforcement agencies, state and local governments as well as volunteer, and other fire departments and emergency medical services organizations.

2.1 Notification Process

A 700 MHz Regional Planning Committee convening meeting was held on June 22, 2001. Notice of the meeting was posted on the Commission's 700 MHz web page on April 9, 2001, more than sixty (60) days prior to the date of the actual meeting. Announcements indicating the date, time and location of the first meeting were sent by mail to the FCC Wireless Telecommunications Bureau and

posted on the Commission's 700 MHz web site. The convener also contacted several agencies via email that expressed interest in the planning process prior to the meeting. There are no federally recognized Native American tribal reservations located within Region 20. Copies of the announcements sent to the FCC and any Public Notices released relating to Region 20's meeting are included in Appendix D. The 700 MHz convening meeting was chaired by Mr. G. Edward Ryan.

Included in the Commissions Daily Digest and web page were the following announcements (summarized):

7/7/2006

FCC Daily Digest

Vol. 25 No. 130 July 7, 2006

REGION 20 (DISTRICT OF COLUMBIA, MARYLAND AND NORTHERN VIRGINIA AREA) 700 MHz PUBLIC SAFETY PLANNING COMMITTEE ANNOUNCES NEXT PLANNING MEETING

The Region 20 (District of Columbia, Maryland and Northern Virginia area)[1] 700 MHz Regional Planning Committee announces that the next meeting will be held on Monday, August 14, 2006, beginning at 10:00 a.m., in the lower level conference room at the Office of Traffic and Highway Maintenance, Maryland State Highway Administration, Hanover Complex, 7491 Connelley Drive, Hanover, Maryland.

1/22/2004

Region 20 (District of Columbia, Maryland & N. Virginia) will have a (700 MHz) Public Safety planning meeting on Thursday, January 22, 2004 at 10:00 a.m., in the Large Conference Room (Lower Level), Office of Traffic & Maintenance, Maryland State Highway Administration, Hanover Complex, 7491 Connelley Drive, Hanover, Maryland. For additional information, contact Region 20 Chairman, C. Edward Ryan, II, at 410-767-4219 or via e-mail at ryan@dbm.state.md.us[2]

[1] The Region 20 area includes the District of Columbia, Maryland and Northern Virginia (Arlington, Fairfax, Fauquier, Loudoun, Prince William and Stafford Counties, and the cities of Alexandria, Fairfax, Falls Church, Manassas and Manassas Park).

[2] These are no longer the correct phone numbers for Mr. Ryan; however, they were the correct numbers at time of publication

9/8/2003
PUBLIC NOTICE (DA 03-2852)

Region 20 (Maryland-Metropolitan Area) Public Safety Planning Committees Announce (700 MHz) Regional Public Safety Planning Meeting and NPSPAC (800 MHz) Regional Public Safety Planning Meeting

12/13/2002
PUBLIC NOTICE (DA 02-3447)
Region 20 (District of Columbia, Maryland, and Northern Virginia) Public Safety Planning Committees Announce Region 20 800 MHz (NPSPAC) Regional Planning Meeting and Region 20 700 MHz Regional Planning Meeting

The Region 20 (700 MHz) Regional Planning Committee will hold a meeting on Monday, June 17, 2002, at 1:30 p.m. at the Maryland State Highway Administration, Hanover, Maryland. Additional information is available from Region 20 Chairman Alan Kealey.

4/09/2001
PUBLIC NOTICE (DA 01-859)
District of Columbia, Maryland and Northern VA, 700 MHz Public Safety Planning Committee (Region 20) Announces First Meeting, June 22, 2001

Meeting announcements were also made over the Region's 700 MHz website:

http://groups.yahoo.com/group/Region20_700MHz/

2.2 Future Meetings

Prior to calling meetings after the approval of the Region 20 Plan, the Operations Committee of the Region shall be charged with the responsibility of notifying persons regarding future meetings. This shall include providing notices to the Commission for insertion into the FCC's Daily Digest as well as specific messages to existing members as well as through the SIECs, NCR, CMARC, and MESIN. If any federally recognized tribes of Native Americans are formed in Region 20, notices will be extended to these bodies.

There shall be no less than thirty (30) days of notice provided prior to a meeting with the sufficiency of notice measured by the posting of the meeting's information in the Daily Digest of the Commission.

2.3 Operations of the Region

Region 20 employs Robert's Rules of Order to conduct meetings. Voting member considerations are listed in the Region 20 By-Laws. The meetings are open to all interested persons and public input time can be provided for anyone to express a viewpoint or to have input to the Regional Planning process.

A minimum of one (1) full committee meeting will be held every twelve months. The Region 20 Chairperson has the authority to call an additional meeting at a time when he/she deems necessary or when he/she deems it in the best interest of the Region to convene. For the convenience of Region 20 members, attempts will be made to coordinate 700 MHz meetings with Region 20 800 MHz meetings.

The Regional Planning Committee Twenty (20) 700 MHz list-serve, http://groups.yahoo.com/group/Region20_700MHz/ was created in July of 2001.

As provided in the bylaws, the Chairperson shall call a meeting of the Regional Planning Committee to elect a Chair, Vice Chair and Secretary to serve for a two-year term.

A chronological list of meetings, summary of minutes, meeting announcements and agendas outlining Region 20 progress in 700 MHz development is located in **Appendix D** of this document.

2.4 Overview of public safety entities that have jurisdiction within or over any or all portions of the Region (state agencies, federal agencies, etc.)

Region 20 supports a wide variety of federal, state, and local first responders and related governmental and non-governmental resources. Included within the Region are a wide variety of state law enforcement agencies requiring statewide radio system support. These systems may also provide interoperability for federal or local government law enforcement agencies.

The Region also supports local law enforcement agencies that may range in size from small police and sheriff's departments to large county or city police departments. There are also many local law enforcement entities within the Region providing support for authorities, higher education, and other specialized areas of criminal justice and public safety.

One will also find a wide variety of fire and emergency medical resources within the Region ranging from municipal fire departments to volunteer fire and rescue organizations.

Emergency medical services may be provided by municipal or volunteer fire departments as well as volunteer rescue squads and commercial ambulance services.

2.5 Solicitation of Plan Comments

Region 20 solicited comments from a wide variety of persons relative to the Plan for 700 MHz. The principle work in development of the Plan was performed by the Region's 700 MHz Technical Committee. Membership on the Technical Committee was open to any member of the Region without limitation and a substantial number of members attended meetings and provided input to the multiple versions of the Plan shared during its development.

Beyond members of the Technical Committee, feedback was actively solicited from the entire membership, particularly the persons who had participated in development of the 800 MHz Plan.

Drafts of the Plan were submitted to the entire membership of Region 20 on multiple occasions. Relevant feedback from the Region's membership was obtained and incorporated into the Plan.

In addition to internal Region 20 members, copies of the Plan in draft form were made to the adjoining Region chairs or in the case of Region 36, the convener. Copies were also provided to the Statewide Interoperability Executive Committees (SIECs) in the Commonwealth and State of Maryland.

Through this process, multiple drafts of the Plan were developed until a final consensus Plan had been developed.

2.6 Process Used to Consider Comments

As noted in Section 2.5, multiple drafts were submitted to the membership of the Technical Committee as well as the entire Region. Meetings were held following the distribution of draft versions and members were invited to attend either in person or by teleconference to provide comments and suggestions. Many comments were offered in the Plan's development and the resulting document provided to the Commission is the culmination of a highly collaborative process.

When comments were submitted, the recommendations were presented to the Technical and/or Regional Committee for discussion and voting. Those comments and submissions supported by the Committees were adopted and incorporated into the Plan.

3.0 Regional Plan Administration and Frequency Coordination

3.1 General Description of Spectrum Allocation – from 47 CFR §90.527 (a)(3)

A. Region 20 takes the position that it has two principle responsibilities to the members and adjacent regions. First, the Regional Plan is predicated upon an attempt to provide as much spectrum to an applicant as the facts and circumstances of the application support. To this end, the Region will consider in totality the current spectral resources of the applicant as well as other potential requirements of other licensees within the applicant's area of operation.

The review will also consider the issue of spectrum (in any band) to be returned by the applicant, if any, and the funding available to implement a system. All of these steps are under-taken to ensure that the Region carefully manages and becomes a good steward of the spectrum for which it is responsible. To the greatest extent possible, the Region desires to demonstrate to both applicants and potential applicants the highest levels of reasonableness in the management of spectral resources for which it is responsible.

To ensure that channels have been allocated appropriately with respect to geographical areas within Region 20, the CAPRAD table of assignments will be utilized as a baseline from which assignments are initiated. The Region has modified the CAPRAD database to include the independent cities of the Commonwealth of Virginia that are not part of a county and as such, omitted by CAPRAD. This step was taken in acknowledgement of the laws of the Commonwealth of Virginia and as a means to prohibit geographical assignment which might have occurred if the plan had been adopted "in toto" from the CAPRAD table of assignments.

As part of its review of an applicant's request, in addition to considering the potential impact upon other eligible users within a geographic area, the Technical Committee will also review the application to ensure that, if approved, the document does not negatively impact other eligible applicants within or adjacent to the Region. Secondly, the Region must protect adjacent and co-channel users in other regions from harmful interference as defined in the applicable rules of the Commission.

Upon FCC approval of this Plan, Region 20 will announce to the Region that the initial window of 700 MHz public safety spectrum is available in the Region and that channels will be initially assigned on a geographical basis within phases, also known as "windows". All available methods will be used to notify public safety entities of channel availability in the Region (see Section 2.2).

For the initial allocation of channels, Region 20 supports the National Coordination Committee Pre-Assignment Rules and Recommendations listed in Appendix F and will use these guidelines as a template to determine if an application submitted to the Regional Planning Committee meets Regional Planning standards. However, the Region will modify the means of channel allocation in order to provide eligible licensees with the number of channels required to implement land mobile radio systems in the frequencies for which this Plan is responsible.

B. Notwithstanding the provisions of paragraph A, when in the opinion of any officer of Region 20 that it is in the best interest of the public safety communications community, applications for channels will be received and processed in compliance with the other provisions of this Plan.

C Applications for channels in Region 20 shall be submitted to the Chair of the Technical Committee. The Technical Committee chair shall be responsible to comply with the provisions of 47 CFR §90.176 (c)–(h) relative to the notification of the adjacent Region of applications for channels as well as compliance with the provisions of 47 CFR §90 Subpart R.

D. In order to maintain accurate records in the CAPRAD database, applicants will provide Region 20 with physical copies of their application along with associated documentation for adjacent Regional Planning Committee review. Upon approval of an application, the Technical Committee will enter the FCC 601 form into the CAPRAD database before the application is forwarded to the FCC certified coordinators.

3.2 The Assignment of Priorities – from 47 CFR §90.527 (a)(4)

A. When applying for new 700 MHz channels, the Region's Technical Committee will prioritize the applications of 700 MHz applicants working with neighboring state and local government agencies to promote and/or continue the establishment of interoperability within their community. This strategy will consider national and regional security issues and promote the equitable distribution of existing spectrum allocations to realize efficient frequency use when applying for 700 MHz spectrum.

B. The Region has developed a scoring matrix to prioritize the recommendation of channels in the 700 MHz frequency band. Channels are first allocated to an eligible licensee through geographical assignments as generally contained in the modified CAPRAD table. In the event that spectrum allocation requests conflict and cannot all be accommodated, the following matrix will be used to determine priority for allotment.

1. Governmental first responder organizations and users

fundamentally involved with the protection of life and property (up to 16 points)

2. Documentation of proposed funding to construct the system using these 700 MHz frequencies must be available and accompany the original spectrum request. (16 points)

3. Development of a new and interoperable trunked and/or wide/broadband data radio system available to all governmental and appropriate NGO units within a geographical area to enhance regional communications (14 points)

4. Users voluntarily reallocating or returning 800 MHz, UHF, and VHF frequencies for the use of other licensees (up to 14 points)

5. Users of P25 compliant or other systems employing spectrally efficient digital trunking technologies (14 points)

6. The release of a RFP (Request for Proposal) or other procurement strategy outlining the design of the proposed system (13 points)

7. User agreement to return channels to the general pool if the proposed radio system is not constructed and substantially ready for operations within five (5) years of the Commission's approval of its license application (13 points)[3]

3.3 Stewardship of Adjunct Spectrum in Other Frequency Bands

When applying for 700 MHz channels, the Region will determine if the applicant is utilizing any channels in the 800 MHz and other bands. Upon an affirmative finding, the Region's Technical Committee will determine the applicant's plan for the continued use of currently licensed 800 MHz and other frequencies and administratively mandate the return of the to be vacated channels when appropriate. The return of channels will be appropriate when the applicant has no demonstrated need for the vacated channels after the 700 MHz channels have been implemented successfully, defined by the Region as one year after beneficial use of the new system. The purpose of this process is to maximize the total available pool of public safety spectrum to Region 20 in both 700 and 800 MHz. as well as other bands. The 700 MHz Technical Committee will alert its 800 MHz counterpart upon any recommendation promoting the eventual return of 800 MHz channels by a current licensee.

While important to maximize the availability of spectrum in all bands, the Region notes that it has no statutory authority under 47 CFR Part 90 to require the return

[3] This differs from criteria 4 based upon the written submission of a pledge by a Chief Administrative Officer to return the channels to the general pool.

of “to be” vacated channels. However, the Region can require that a responsible person within the applicant’s organization provide a written statement certifying that the applicant intends to return the “to be” vacated channels within one (1) year after the new 700 MHz system is placed into post-acceptance service, also known as “beneficial use” for use by first responders. The Region’s expectation is that the person submitting the letter of certification relative to the return of the “to be” vacated channels shall be the organization’s chief administrative officer or other person having budgetary authority over the internal department of the applicant requesting the channels.

In the event that the applicant fails to return the vacated channels to the Commission for use by other applicants, the Region shall make a copy of the certification letter available to any eligible organization requiring the vacated channels for subsequent filing to the Commission.

3.4 Coordination with Adjacent Regions – from 47 CFR §90.527 (a)(5)

Region 20 recognizes the need to coordinate the development, review, and approval of the Plan with the adjacent Regions. Regions 28, 42, and 44 have convened and initiated the development for their 700 MHz Plans and throughout the development process, the Technical Committee of Region 20 has shared progress reports with the Chairs of these Regions. Region 36 has not convened a meeting of the 700 MHz RPC.

Even though Region 36 has not convened to formulate their plan, when the Region 20 Plan was completed intra-regionally, it was distributed to the Chairpersons of Regions 28, 42, and 44 as well as the Convener for Region 36 for review and action.

With respect to the on-going coordination of frequency applications upon approval of the Plan by the Commission, the Chair of the Region 20 Technical Committee shall be responsible for all of the provisions of 47 CFR §90.176 (c)–(h). The Chair will distribute the request to all other agencies with allotments in the plan for review and approval electronically. Absent a protest, the Regional Planning Committee will approve the application and (if applicable), upon receipt of a cancellation consent letter, submit it, through the CAPRAD database, to the applicant's preferred FCC-certified frequency coordinator for processing. This process meets the requirements of the FCC pursuant to 47 CFR §90.176 (c).

The Technical Committee Chairperson will be responsible to update the CAPRAD database to reflect the approved application and place the channels for the proposed system in "pre-license" status.

3.5 Use of the CAPRAD Pre-Assignment Table

The Region believes that the CAPRAD Pre-Assignment Table represents an

appropriate strategy as the initial basis to assign channels in the first window of applications from within the Region. CAPRAD was established to ensure an appropriate distribution of channels on the basis of geographic population. Additionally, the channels were assigned to minimize the potential of co-channel and adjacent channel interference. However, CAPRAD did not differentiate the channel assignments based upon geographical areas already enjoying advanced digital trunked radio services in the 800 MHz band and contrast those assignments with users in highly populated areas utilizing older conventional technologies. It is the users of older conventional systems that may have the greatest need for spectrum to construct modern digital trunked radio systems.

As a principle, the Region will utilize CAPRAD as the fundamental basis to make initial channel assignments to an eligible user within a geographic area. The Region recognizes and interprets the Commission's rules to mean that channels are assigned geographically and as an example, not to specific political entities such as a county government, but to any eligible user within a county. To illustrate further, if a CAPRAD assignment is to (hypothetical) Smith County, any eligible user within Smith County may apply for use of the channel as may be consistent with 47 CFR § 90 Subpart R.

However, the Region recognizes that there are some limitations within CAPRAD. As noted earlier in the Plan, the Commonwealth of Virginia is unique in the United States as it is the only state in which all cities are independent and not part of an adjacent county. CAPRAD does not recognize this idiosyncrasy of the Commonwealth and fails to assign any channels to the independent cities within the Virginia counties in Region 20. The Region 20 plan deviates from CAPRAD and makes assignments to the independent cities within the Commonwealth.

If an eligible user in Region 20 requires more channels than are available within CAPRAD and the facts and circumstances of the user's request justify the channels, the Region will endeavor to meet the applicant's requirements provided that the applicant provides documentation to support the need for additional channels. The documentation shall be provided at the expense of the applicant and may include "Grade of Service" studies, proposed channel loading data, fleet maps, and other documents demonstrating the need for additional channels.

The Region believes that the most efficient use of spectrum curtails the arbitrary assignment of voice channels in four blocks of adjacent 6.25 KHz channels. As will be detailed in the Plan, the Region supports a "technology-neutral" strategy that permits an applicant to specify the spectral requirements of the proposed system which may deviate from the CAPRAD table of assignments.

To minimize the likelihood of "orphan" channels, the Region will permit the appropriate exchange of CAPRAD-assigned channels between eligible users desiring 12.5 KHz assignments as consistent with Section 6.3 of this Plan. However, with respect to the uniqueness of Virginia law relative to the

independence of cities, it is entirely possible that a local government is the de facto owner of a window one channel assignment.

De facto use is determined when the licensee is:

1. The sole provider of law enforcement, fire, and EMS communications within the geographic area of operation, or

2. The principle provider of law enforcement, fire, and EMS communications within the geographical area of operation, or

3. If not the sole or principle provider of law enforcement, fire, and EMS communications within the geographical area of operation, the other eligible first responder organizations indicate to the Region that they do not intend to utilize the 700 MHz channels within the geographical area of operation.

When it is determined that de facto use is attributable to a specific licensee, the licensee may waive the use of certain channels and permit their reassignment to another licensee provided that such reassignment does not result in harmful interference to any co-channel or adjacent channel licensee and is consistent with the provisions of Section 6.3 of this Plan.

3.6 Process for Requesting Channel Assignments

To request 700 MHz channels from Region 20, a full application package must be submitted to the Region's Technical Committee.

The application must include:

1. A FCC Form 601

2. A description of the proposed system, including proposed coverage maps, detailing users to be served and provisions for the provision of interoperability with adjoining and regional jurisdictions

3. A justification for the additional spectrum as well as proposed "give backs" of spectrum no longer required

4. An interference prediction map using the methodologies of TIA TSB 88 (most recent version) guidelines

5. Maps showing all interference predicted in the proposed system

6. Documents indicating agency-funding commitments sufficient to fund the development of the proposed system(s) and an indication as to when they

will migrate from their existing system to the new system

7. A statement describing the strategy for the acquisition of the proposed system as well as the applicant's pledge to return the assigned spectrum if required pursuant to Section 3.2 B 7 of the Region 20 Plan

3.7 Allocation Disputes

An eligible licensee may protest a proposed system within 30 calendar days of the Window 1 notification. Protests will only be considered if the allocation does not conform to the Region 20 Plan or objecting agency or the Chairperson can show harmful interference is likely based on the information submitted by the agency requesting the new allocation. If an agency with pre-licensed/Region approved co-channel or adjacent channel allocations objects to a proposed allocation due to concerns about potential interference, the objecting agency may request field tests be done to confirm or refute interference potential. The completion of these field tests will be required for Regional application approval. Coverage area service/interference contours of the proposed system(s) should meet values designated in Section 6.1 of this document. Any costs associated with field tests or any other requirement to obtain Region 20 plan approval is the responsibility of the agency submitting the application to Region 20.

The parties involved must resolve the allocation dispute pursuant to the Plan and notify the Region Chair of such resolution within 30 calendar days. If the parties involved cannot resolve the allocation dispute within that timeframe, then a special full Committee meeting will be scheduled to consider and vote on the protest. If approved, the application will be submitted through the CAPRAD database to the applicant's chosen FCC-certified frequency coordinator for processing

3.8 Lower Power "Campus Eligible" General Use Channels

With the implementation of 700 MHz public safety spectrum throughout Region 20, there may be opportunities for increased channel reuse when developing radio systems for "campus" type operations. Examples of those who may capitalize on this opportunity include hospitals, stadiums, malls, or other places of public gathering, universities, transit systems, and ports. While these channels have been designated in jurisdictional pool allotments with proper designations, they do not enjoy the benefits of wide area channels in that they are not cleared for usage over a wide area. In many instances, facilities require a smaller or more specific geographical coverage area than assumed in the initial channel packing plan and may be able to be reused more efficiently. These "campus" type systems also, in many cases, require in-building or confined space/tunnel radio coverage or communications along a linear pathway, such as a maintenance or right of way. Public safety channels can be allotted to this type operation in a Region and can lead to effective system development, along with increased spectral efficiency, if

power levels and Area of Protection (AOP) of the area are taken into account in system planning. These parameters must be established appropriate to the area of coverage. In order to facilitate this effective method of system implementation, channels have been identified in certain areas of Region 20 that may be utilized in a smaller service area. These channels may not be eligible to be utilized throughout the jurisdiction to which they are allotted and the following criteria must be adhered to when requesting channels from Region 20 for operations of this type:

A. The 50dBu service contour of the proposed system must not exceed an area more than 2 miles from the proposed service area. When this 2-mile distance extends to an adjacent Region, the applicant must obtain concurrence from the adjacent Region. Reduced external antenna height, along with reduced effective radiated power (ERP), directional antennae, distributed antenna systems, and radiating "leaky coax," are all tools that should be utilized in the development of these type systems.

B. Region 20 will ensure that the development of these types of systems will in no way interfere with co-channel or adjacent channel users within Region 20 or Region 20's adjacent neighbors. The Chairperson of the Region or its Technical subcommittee, or a majority of the members of the Region, has the authority to request and require engineering studies from the applicant that indicates no harmful interference will be introduced to any co-channel or adjacent channel existing user prior to application approval.

C. For 12.5/25 kHz co-channel assignments, the 50dBu service contour of the proposed stations will be allowed to extend beyond the defined service area for a distance no greater than 2 miles. An adjacent/alternate 12.5/25 kHz channel shall be allowed to have its 60 dBμ (50, 50) contour touch, but not overlap the 40dBμ service (50, 50) contour of an adjacent/alternate system being protected. Evaluations should be made in both directions to ensure compliance. The approval of systems utilizing jurisdictional allotment channels labeled "Campus" is subject to approval of the Region 20 700 MHz regional planning committee. They are the final authority on parameters associated with "campus" type operations.

If Region 20 receives an application for low power fixed use and the proposed service contour encroaches onto an adjacent Region prior to the channel allotted to the Region being implemented in a specific system, the application must be modified. Through the modifications, the service contour shall not encroach into the adjacent Region unless the applicant provides the Region 20 Planning Committee with written concurrence from the adjacent Region permitting the original design.

3.9 Management of Channel Assignments

All channels approved by Region 20 for licensees under its jurisdiction and should be placed into operation within five (5) years of the date in which the application was approved by the Commission. The Region 20 Plan requires that prior to request for approval to use channels, the licensee must be actively preparing for the development of a 700 MHz radio system. Attributes of the licensee's intent to use the channels includes but is not limited to:

A. Completion of a Needs Assessment study documenting the need for channels in the 700 MHz band and/or

B. Development and/or issuance of a Request for Proposals (RFP) or other procurement document designed to acquire a 700 MHz land mobile radio system and/or

C. Approval of funding for the radio project

D. A specific timetable for the system resulting in a target date for placing the system on the air

~~The Region expects that the attributes identified above will commence within five (5) years of the date in which the FCC approves the applicant's license.~~

Pursuant to 47 CFR § 90.551 (Construction requirements), each station authorized to operate in the 769-775 MHz and 799-805 MHz frequency bands must be constructed and placed into operation within 12 months from the date of grant of the authorization. However, licensees may request a longer construction period, up to but not exceeding 5 years, pursuant to § 90.155(b).

In the event that a licensee has not taken substantial steps to implement the 700 MHz radio system in accordance with the provisions of this section of the Plan, Region 20 reserves the right to support the return the channels to the general pool for reassignment to other licensees.

Notwithstanding the provisions above, the approval of channels shall not be rescinded until the licensee has been notified of such intent to withdraw Regional support for use of channels ninety (90) days prior to such action. The licensee shall be afforded an opportunity to request in writing an extension of time to maintain Regional support related to use of the channels. Such request shall detail the justifications for maintaining the channels and indicate when such channels shall be placed on the air for the purposes of testing or operations.

Once notified by the Region of its intent to rescind support for use of the channels, the burden is placed upon the licensee to request in writing an extension of time. If the licensee does not file such an extension within ninety (90) days of notice

issuance or if the request of the licensee is determined by the Region to be without merit, the Region will support return of channels to the general pool at the end of the ninety (90) day notice period.

3.10 Limitations of Channel Assignments

Region 20 is located in a highly populated area of the United States and the number of channels available is extremely constrained. To that end, the Region pledges to use its authority to the fullest in the management of spectrum within its authority. Notwithstanding the preceding statements of the Plan, an eligible licensee shall be afforded only the number of channels as needed for the appropriate operation of a land mobile radio system within the constraints of 47 CFR §90 Subpart R (***as amended by the Second Report and Order***).

The Region recognizes past practices that permitted the slow growth of 800 MHz radio systems. With respect to the cost of modern digital trunked radio systems employing the 700 MHz frequency band, the Region anticipates that new networks may not require the slow growth practices of the past. Accordingly, the Region will generally assign a channel (one transmit frequency with paired receive frequency) per one hundred (100) proposed users.

In extraordinary circumstances, the Region's Technical Committee may consider a "slow growth" approach and assign one channel pair per seventy (70) proposed users. If a program of slow growth is permitted, the Technical Committee shall establish annual reporting requirements as well as the applicant's progress in reaching the standard level of one (1) channel pair per one hundred (100) users.

For the purpose of defining the number of channels available to a licensee, a radio may be a mobile or portable subscriber device. Channel loading will be calculated on a 1:1 basis. As an example, an applicant purchasing 1,000 mobiles and 1,000 portables shall qualify for twenty (20) channels or "voice paths"[4]. Utilizing a 12.5 KHz technology, this assignment would yield ten (10) operating frequencies. Conversely, a 25 KHz technology would produce five (5) operating frequencies.

3.11 Detailed Description of How Region 20 Maximized Spectrum – from 47 CFR §90.527 (a)(6)

The Region is very cognizant of the need to utilize spectrum efficiently. Of equal importance, the Region believes that the assignment of spectrum should be "technology neutral" and tailored to the requirements of the applicant. The Region takes note of the fact that the United States Department of Homeland Security has adopted the Project 25 (P25) standard as the preferred technological standard for public safety radio systems. With a preponderance of federal, state, and other critical infrastructure in Region 20 and the fact that member jurisdictions within the Region have already experienced the impact of terrorism,

[4] Voice path as defined in 47 CFR §90.535 (d)(1)

the Region appreciates and supports the need for public safety interoperability that is manifested in the P25 standard.

P25 FDMA systems utilize "one-half" blocks or 12.5 KHz channels as opposed to the 25 KHz "full" blocks of channels contained with the CAPRAD assignments. 12.5 kHz TDMA systems employ two 6.25 KHz equivalent channels. To arbitrarily assign 25 KHz blocks of channels to applicants developing P25 Frequency Division Multiple Access (FDMA)[5] or TDMA compliant systems potentially results in a waste of spectrum and the creation of orphan channels. To avoid the creation of orphan channels and equally, to maximize the spectrum available to Region 20 users, the Plan calls upon the Technical Committee to assign channels based upon the applicant's proposed technology reflecting the vendor neutral philosophy of the Region.

As indicated in Section 3.5 of the Region's Plan, CAPRAD will be the initial basis upon which channels are assigned. When only two of the four consecutive channels in CAPRAD are required, the Technical Committee will assign the remaining channels to another applicant provided that the Commission's rules relative to co-channel and adjacent channel interference are observed. Similarly, when four (4) consecutive 6.25 KHz equivalent channels are requested by an applicant, the Technical Committee will utilize the full CAPRAD assignment pursuant to this Plan.

In the event that all potential applicants within a geographical area plan to utilize a P25 technology or waive claim to the assigned channels during the first assignment window, the Technical Committee may assign the channels to another geographical area or applicant pursuant to Section 6.3 of this Plan. As an example, the City government of Alexandria, VA is the sole (de facto) potential applicant for the channels assigned to the geographical region in which it is located as it is the only provider of emergency services. If the City of Alexandria waives the use of the channels, the Technical Committee may reassign the channels to another geographical area in need of channels pursuant to the restrictions described in Section 6.3 of the Plan.

Equally, if the City of Alexandria, continuing with the example above, elected to only utilize two (2) of the four (4) CAPRAD 6.25 KHz channels for a P25 system, the Technical Committee may reuse the remaining channels in another geographical area to prevent harmful adjacent channel interference to the P25 system again pursuant to the provisions of Section 6.3 of this Plan.

To manage further the 700 MHz spectrum under the jurisdiction of Region 20, the Plan encourages strongly the use of digital trunked and other spectrum efficient technologies. The Region's preference for spectral efficient technologies is incorporated into the Plan as part of Section 3.2 B 3 which incorporates points

[5] The Plan recognizes that the use of FDMA technology would be limited pursuant to 47 CFR §90.535 (d)(1) and 47 CFR §90.535 (d)(2)

within the decision making matrix for the review of applications. Similarly, the Plan awards points when a system is designed to support the users from multiple jurisdictions.

The Plan recognizes that due to the complexity of regional requirements for interoperability as well as the maturity of typical system management personnel, virtually all requests coming to the Technical Committee will relate to requirements in support of relatively sophisticated communications systems.

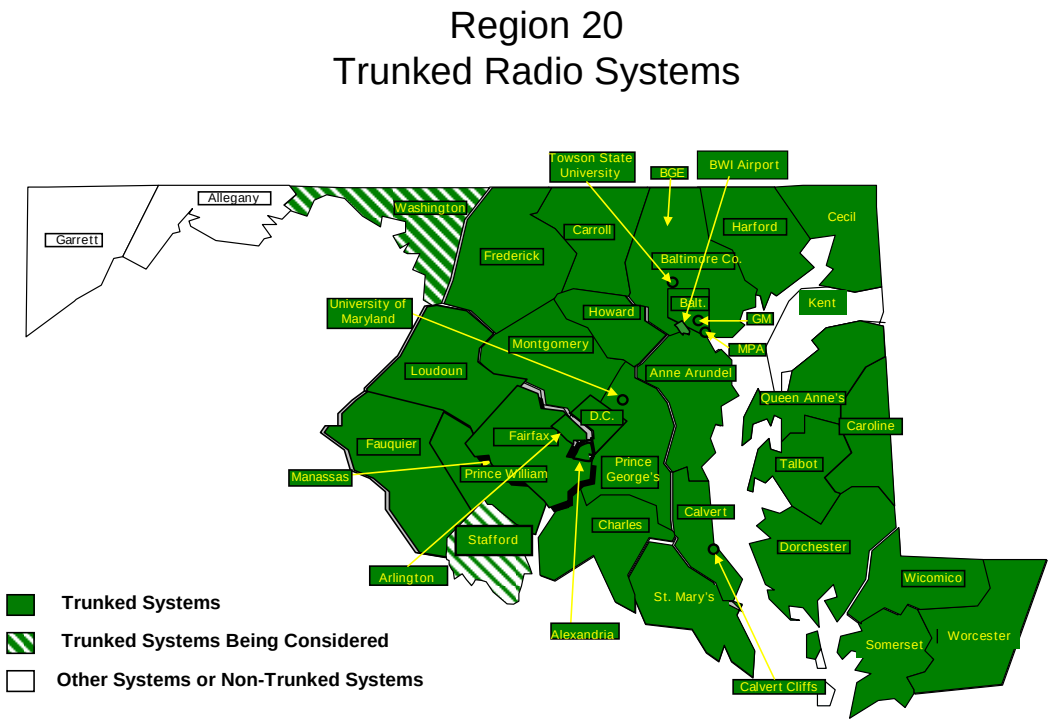


Figure 1 - Trunked Radio Systems in Region 20

To support the requirements of Region 20, a comprehensive planning process for both voice and data channels has been adopted and is reflected in the process flow chart labeled as Figure 1 below.

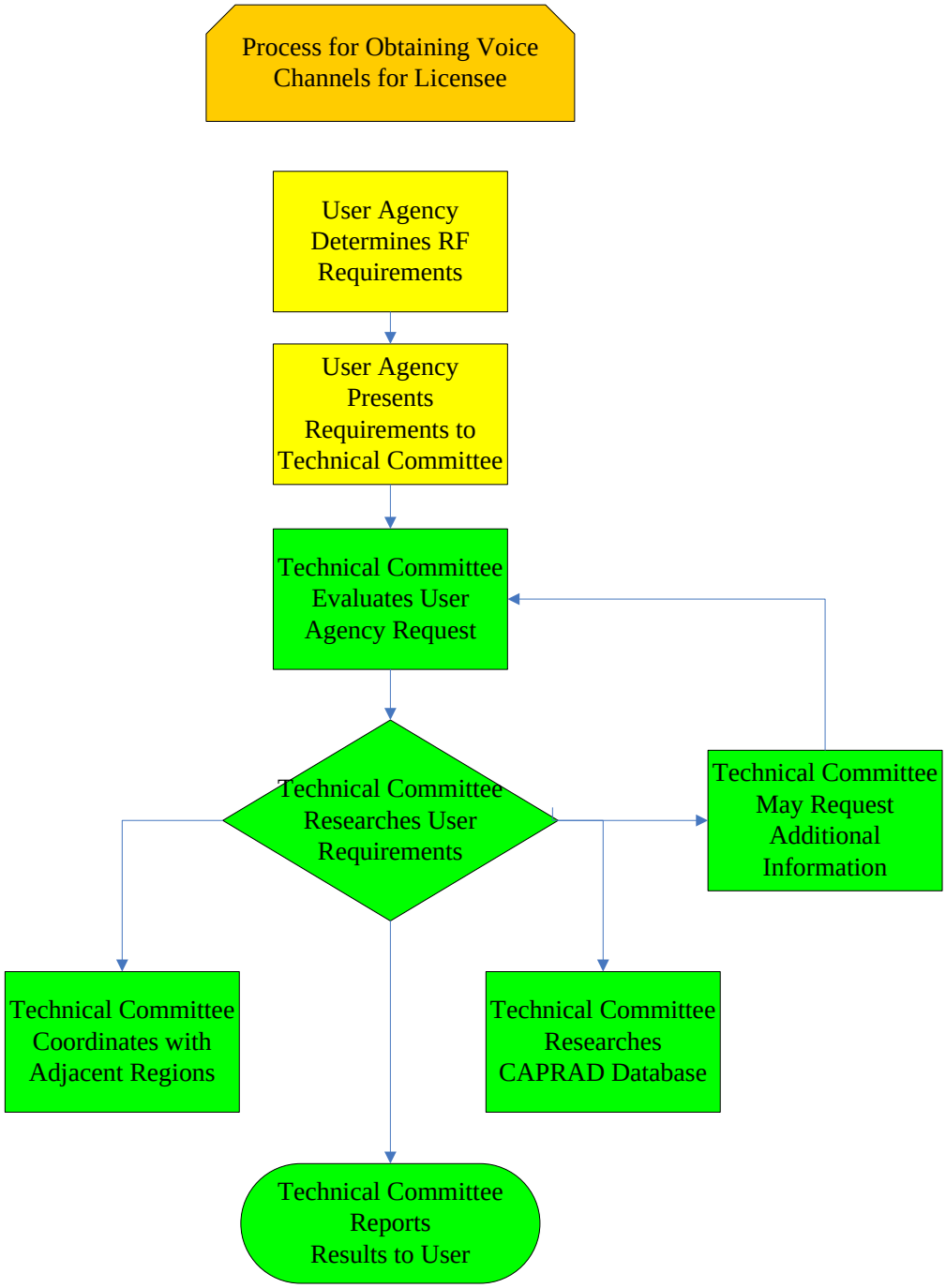


Figure 2
Process for Evaluating User Applications for Voice ~~and Data~~ Channels

3.12 Low Power Channels

The Plan provides guidelines relative to the use of the low power 700 MHz channels under the authority of the Regional Planning Committee (RPC) as defined by 47 CFR §90.531(b)(3).

Eligibility

The following entities are eligible to use low-power channels under the control of the Regional Planning Committee pursuant to 47 CFR §90.523(a) and (b).

(a) *State or local government entities.*

Any territory, possession, state, city, county, town, or similar State or local governmental entity is eligible to hold authorizations in the 769–775 MHz and 799–805 MHz frequency bands.

(b) *Nongovernmental organizations.*

A nongovernmental organization (NGO) that provides services, the sole or principal purpose of which is to protect the safety of life, health, or property, is eligible to hold an authorization for a system operating in the 769–775 MHz and 799–805 MHz frequency bands for transmission or reception of communications essential to providing such services if (and only for so long as) the NGO applicant/licensee:

(1) Has the ongoing support (to operate such system) of a state or local governmental entity whose mission is the oversight of or provision of services, the sole or principal purpose of which is to protect the safety of life, health, or property;

(2) Operates such authorized system solely for transmission of communication essential to providing services the sole or principal purpose of which is to protect the safety of life, health, or property; and

(3) All applications submitted by NGOs must be accompanied by a new, written certification of support (for the NGO applicant to operate the applied for system) by the state or local governmental entity referenced in paragraph (b)(1) of this section.

Low-power 700 MHz Channel Use

Frequencies will be used in a simplex or repeater mode as specified within this provision of the Region's Plan for 700 MHz. The Plan will combine two channels as contained in 47 CFR §90.531(b)(3) to yield a 12.5 KHz simplex operating frequency. In the repeater mode, four 700 MHz channels shall be combined to yield a 12.5 KHz transmit and 12.5 KHz receive frequency.

Use within the Region

Low-power 700 MHz frequencies are limited to transmissions with the effective radiated power (ERP) not to exceed two (2) watts. These frequencies can be used at the broad discretion of eligible users in one of two methodologies, direct radio-to-radio or simplex operation and as an Incident Area Network (IAN) or other low power technology providing a repeater capability. The use of these frequencies for official public safety or public service communications is permitted by a single public safety agency or prior to the actual invocation of interoperable communications between two or more public safety agencies. Communications of a personal non-official purpose are prohibited.

Assignment of Frequencies

First responders have broad discretion in the use of these channels. However, if an incident is of sufficient scale to invoke the National Incident Management System (NIMS), the Incident Commander shall determine which low-power channels shall be used for first responders as well as the use of simplex and/or IAN repeater technology.

Modulation

Pursuant to 47 CFR §90.525(a), operation on these channels may utilize digital or analog modulation. For the purpose of this Plan, analog operations will be utilized. Analog operations will utilize the 11K0F3E emission type.

Programming of Frequencies

Eligible licensees are encouraged to program related frequencies into 700 MHz capable mobile and portable radios as may be practical pursuant to the Service Assignment tables on the following pages. This programming is not mandatory as some licensees may have insufficient capacity in subscriber devices to accommodate these frequencies.

Service Assignments

A table of repeater and direct or simplex assignments begins on the following pages. These assignments notate specific frequencies reserved for EMS, fire, and law enforcement users. For all other users, Generic Public Safety/Public Service frequencies exist that can be used by any eligible licensee as defined in 47 CFR §90.523.

Repeater/Incident Area Network Operation

From the Department of Homeland Security SAFECOM Statement of Requirements[6], ***An incident area network (IAN) is a network created for a specific incident. This network is temporary in nature***. For the IAN or other repeater operation, the Region will follow the national deployment model; the lower frequency shall be used for the Repeater transmitter frequency while the upper frequency is employed for mobile/portable

[6] SAFECOM Statement of Requirements, March 10, 2004, page 6.

transmissions. Repeater operation is identified by the "2" (2-channel) behind the service name, e.g. "7TAC**2**1 meaning 700 MHz (7) Tactical (TAC) Frequency with Repeater (2) frequency 1 (1).

Freq. Name	Repeater TX	Repeater RX	Applicable Service
7TAC21	Channels 1-2	Channels 961-962	Generic Public Safety/Service
7TAC22	Channels 3-4	Channels 963-964	Generic Public Safety/Service
7TAC23	Channels 957-958	Channels 1917-1918	Generic Public Safety/Service
7FIRE21	Channels 5-6	Channels 965-966	Fire
7FIRE22	Channels 7-8	Channels 967-968	Fire
7MED21	Channels 949-950	Channels 1909-1910	EMS
7MED22	Channels 951-952	Channels 1911-1912	EMS
7LAW21	Channels 953-954	Channels 1913-1914	Law Enforcement
7LAW22	Channels 955-956	Channels 1915-1916	Law Enforcement

Freq. Name	Subscriber TX	Subscriber RX	Applicable Service (Notes)
7TAC21	Channels 961-962	Channels 1-2	Generic Public Safety/Service
7TAC22	Channels 963-964	Channels 3-4	Generic Public Safety/Service
7TAC23	Channels 1917-1918	Channels 957-958	Generic Public Safety/Service
7FIRE21	Channels 965-966	Channels 5-6	Fire (1)
7FIRE22	Channels 967-968	Channels 7-8	Fire (1)
7MED21	Channels 1909-1910	Channels 949-950	EMS (2)
7MED22	Channels 1911-1912	Channels 951-952	EMS (2)
7LAW21	Channels 1913-1914	Channels 953-954	Law Enforcement (3)
7LAW22	Channels 1915-1916	Channels 955-956	Law Enforcement (3)

(1) These frequencies only programmed into mobile and portable radios used in the fire radio service.
(2) These frequencies only programmed into mobile and portable radios used in the EMS radio service.
(3) These frequencies only programmed into mobile and portable radios used in the law enforcement radio service.

Direct Radio-to Radio or Simplex Operation

Direct or simplex operation is identified by the "1" (1-channel) behind the service name, e.g. "7TAC**1**1 meaning 700 MHz (7) Tactical (TAC) Frequency with "Direct" or simplex communications (1) on frequency 1 (1).

Use (Notes)	Channels	Name
Generic Public Safety/Service	Channels 1-2	7TAC11D
Generic Public Safety/Service	Channels 3-4	7TAC12D
Generic Public Safety/Service	Channels 961-962	7TAC13D
Generic Public Safety/Service	Channels 963-964	7TAC14D
Generic Public Safety/Service	Channels 957-958	7TAC15D
Generic Public Safety/Service	Channels 1917-1918	7TAC16D
Fire Incident Management (1)	Channels 5-6	7FIRE11D
Fire Incident Management (1)	Channels 7-8	7FIRE12D
Fire Incident Management (1)	Channels 965-966	7FIRE13D
Fire Incident Management (1)	Channels 967-968	7FIRE14D
EMS (2)	Channels 949-950	7MED11D
EMS (2)	Channels 951-952	7MED12D
EMS (2)	Channels 1909-1910	7MED13D
EMS (2)	Channels 1911-1912	7MED14D
Law Enforcement (3)	Channels 953-954	7LAW11D
Law Enforcement (3)	Channels 955-956	7LAW12D
Law Enforcement (3)	Channels 1913-1914	7LAW13D
Law Enforcement (3)	Channels 1915-1916	7LAW14D

(1) These frequencies only programmed into mobile and portable radios used in the fire radio service.
(2) These frequencies only programmed into mobile and portable radios used in the EMS radio service.
(3) These frequencies only programmed into mobile and portable radios used in the law enforcement radio service.

3.13 Wideband/Broadband Data

Pursuant to the Second Report and Order, Docket WT 96-86, Region 20 notes that the former "wideband" channels have been reallocated by the Commission to a single nationwide public safety licensee. Region 20 has deleted the assignments from the CAPRAD database. Region 20 will take no action relative to these frequencies except as may be required by the Commission.

Notwithstanding the above, the Region acknowledges and will comply with the Commission's order in Docket Action 07-454 adopted January 31, 2007 relative to the National Capital Region's Regional Wireless Broadband Network (RWBN).

3.14 Dispute Resolution - Intra-Regional

In the event an agency disputes the implementation of this plan or the Federal Communications Commission approval of this plan or parts of this plan, the disputing agency representative must notify the Chair of the Region in writing. This section does not apply to protests over new spectrum allocations. The Chair will attempt to resolve the dispute on an informal basis.

If after 30 days the dispute is not resolved, the Chair (or Vice Chair) will appoint a Dispute Resolution Committee consisting of a member from the State of Maryland or the District of Columbia or the Commonwealth of Virginia and at least three additional members from the jurisdictions in Region 20. That committee will select a Chair to head the committee.

The Regional Plan Chair (or Vice Chair) will represent the Region in presentations to the Dispute Resolution Committee. The Committee will hear input from the disputing agency, any effected agencies, and the Region Chair. The Committee will then meet in executive session to prepare a recommendation to resolve the dispute. Should this recommendation not be acceptable to the disputing agency/agencies, the dispute and all written documentation from the dispute will be forwarded to the National Planning Oversight Committee for dispute resolution. As a last resort, the dispute will be forwarded to the Federal Communications Commission for final resolution.

See Appendix J for dispute resolution procedures.

3.15 Conflict of Interest

If a party to the dispute has a conflict of interest through his/her employment in any matter before the Region, the Chair or Vice Chair will attempt resolution. If the Chair has a conflict of interest, he/she will be precluded from voting on such matters.

3.16 Protection of TV/DTV stations

Region 20 anticipates that no licensees will begin operations until after February 18, 2009. Should there be an application with anticipated operation prior to February 18, 2009, the licensee will be required to protect existing television and digital television stations as required in 47 CFR §90.545.

Additional information is contained in Appendix K.

3.17 47 CFR §90.545 TV/DTV Interference Protection Criteria

Public safety base, control, and mobile transmitters in the ***769–775 MHz and 799–805*** MHz frequency bands must be operated only in accordance with the rules in this section, to reduce the potential for interference to public reception of the signals of existing TV and DTV broadcast stations transmitting on TV Channels 62, 63, 64, 65, 67, 68 or 69.

(a) *D/U ratios.* Licensees of public safety stations must choose site locations that are a sufficient distance from co-channel and adjacent channel TV and DTV stations, and/or must use reduced transmitting power or transmitting antenna height such that the following minimum desired signal to undesired signal ratios (D/U ratios) are met:

(1) The minimum D/U ratio for co-channel stations is 40 dB at the hypothetical Grade B contour (64 dBμV/m) (88.5 kilometers or 55.0 miles) of the TV station or 17 dB at the equivalent Grade B contour (41 dBμV/m) (88.5 kilometers or 55.0 miles) of the DTV station.

(2) The minimum D/U ratio for adjacent channel stations is 0 dB at the hypothetical Grade B contour (64 dBμV/m) (88.5 kilometers or 55.0 miles) of the TV station or ¥23 dB at the equivalent Grade B contour (41 dBμV/m) (88.5 kilometers or 55.0 miles) of the DTV station.

(b) *Maximum ERP and HAAT.* The maximum effective radiated power (ERP) and the antenna height above average terrain (HAAT) of the proposed land mobile base station, the associated control station, and the mobile transmitters shall be determined using the methods described in this section.

(1) Each base station is limited to a maximum ERP of 1000 watts.

(2) Each control station is limited to a maximum ERP of 200 watts and a maximum HAAT of 61 m. (200 ft).

(3) Each mobile station is limited to a maximum ERP of 30 watts and a maximum antenna height of 6.1 m. (20 ft.).

(4) Each portable (handheld) transmitter is limited to a maximum ERP of 3 watts.

(5) All transmitters are subject to the power reductions given in Figure B of § 90.309 of this chapter, for antenna heights higher than 152 meters (500 ft).

(c) *Methods.* The methods used to calculate TV contours and antenna heights above average terrain are given in §§ 73.683 and 73.684 of this chapter. Tables to

determine the necessary minimum distance from the public safety station to the TV/DTV station, assuming that the TV/DTV station has a hypothetical or equivalent Grade B contour of 88.5 kilometers (55.0 miles), are located in § 90.309 and labeled as Tables B, D, and E. Values between those given in the tables may be determined by linear interpolation. The locations of existing and proposed TV/DTV stations during the transition period are given in Part 73 of this chapter and in the final proceedings of MM Docket No. 87–268. The DTV allotments are:

State	City	NTSC TV Ch.	DTV Ch.	ERP (kW)	HAAT (m)
California	Stockton	64	62	63.5	874
California	Los Angeles	11	65	688.7	896
California	Riverside	62	68	180.1	723
California	Concord	42	63	61.0	856
Pennsylvania	Allentown	39	62	50.0	302
Pennsylvania	Philadelphia	6	64	1000.0	332
Pennsylvania	Philadelphia	10	67	791.8	354
Puerto Rico	Aguada	50	62	50.0	343
Puerto Rico	Mayaguez	16	63	50.0	347
Puerto Rico	Naranjito	64	65	50.0	142

The transition period is scheduled to end on December 31, 2006. After that time, unless otherwise directed by the Commission, public safety stations will no longer be required to protect reception of co-channel or adjacent channel TV/DTV stations.

1. Licensees of stations operating within the ERP and HAAT limits of paragraph (b) must select one of three methods to meet the TV/DTV protection requirements, subject to Commission approval:

    a. utilize the geographic separation specified in the tables referenced below;

    b. submit an engineering study justifying the proposed separations based on the actual parameters of the land mobile station and the actual parameters of the TV/DTV station(s) it is trying to protect; or,

    c. obtain written concurrence from the applicable TV/DTV station(s). If this method is chosen, a copy of the agreement must be submitted with the application.

2. The following is the method for geographic separations.

    a. Base stations having an antenna height (HAAT) less than 152 m. (500 ft.) shall afford protection to co-channel and adjacent channel TV/DTV stations in accordance with the values specified in Table B (co-channel frequencies based on 40 dB protection) and Table E (adjacent channel frequencies based on 0 dB protection) in Sec. 90.309 of this

part. For base stations having an antenna height (HAAT) between 152-914 meters (500-3,000 ft.) the effective radiated power must be reduced below 1 kilowatt in accordance with the values shown in the power reduction graph in Figure B in Sec. 90.309 of this part. For heights of more than 152 m. (500 ft.) above average terrain, the distance to the radio path horizon will be calculated assuming smooth earth. If the distance so determined equals or exceeds the distance to the hypothetical or equivalent Grade B contour of a co-channel TV/DTV station (i.e., it exceeds the distance from the appropriate Table in Sec. 90.309 to the relevant TV/DTV station) an authorization will not be granted unless it can be shown in an engineering study (method 2) that actual terrain considerations are such as to provide the desired protection at the actual Grade B contour (64 dB[mu]V/m for TV and 41 dB[mu]V/m for DTV stations), or that the effective radiated power will be further reduced so that, assuming free space attenuation, the desired protection at the actual Grade B contour (64 dB[mu]V/m for TV and 41 dB[mu]V/m coverage contour for DTV stations) will be achieved. Directions for calculating powers, heights, and reduction curves are listed in Sec. 90.309 for land mobile stations. Directions for calculating coverage contours are listed in Sec. Sec. 73.683-685 for TV stations and in Sec. 73.625 for DTV stations.

b. Control and mobile stations (including portables) are limited in height and power and therefore shall afford protection to co-channel and adjacent channel TV/DTV stations in accordance with the values specified in Table D (co-channel frequencies based on 40 dB protection) in Sec. 90.309 of this part and a minimum distance of 8 kilometers (5 miles) from all adjacent channel TV/DTV station hypothetical or equivalent Grade B contours (adjacent channel frequencies based on 0 dB protection for TV stations and--23 dB for DTV stations). Since control and mobile stations may affect different TV/DTV stations than the associated base station, particular care must be taken by applicants to ensure that all the appropriate TV/DTV stations are considered (e.g., a base station may be operating on TV Channel 64 and the mobiles on TV Channel 69, in which case TV Channels 63, 64, 65, 68, and 69 must be protected). Since mobiles and portables are able to move and communicate with each other, licensees or coordinators must determine the areas where the mobiles can and cannot roam in order to protect the TV/DTV stations, and advise the mobile operators of

these areas and their restrictions.

c. In order to protect certain TV/DTV stations and to ensure protection from these stations which may have extremely large contours due to unusual height situations, an additional distance factor must be used by all public safety base, control and mobile stations. For all co-channel and adjacent channel TV/DTV stations which have an HAAT between 350 and 600 meters, public safety stations must add the following DISTANCE FACTOR to the value obtained from the referenced Tables in 47 CFR §90.309 and to the distance for control and mobile stations on adjacent TV/DTV channels (96.5 km).

DISTANCE FACTOR = (TV/DTV HAAT-350) / 14 in kilometers, where HAAT is the TV or DTV station antenna height above average terrain obtained from its authorized or proposed facilities, whichever is greater.

d. For all co-channel and adjacent channel TV/DTV stations which have an antenna height above average terrain greater than 600 meters, public safety stations must add 18 kilometers as the DISTANCE FACTOR to the value obtained from the referenced Tables in 47 CFR §90.309 and to the distance for control and mobile stations on adjacent TV/DTV channels (96.5 km).

Note 47 CFR §90.545: The 88.5 km (55.0 mi) Grade B service contour (64 dB[mu]V/m) is based on a hypothetical TV station operating at an effective radiated power of one megawatt, a transmitting antenna height above average terrain of 610 meters (2000 feet) and the Commission's R-6602 F(50,50) curves. See Sec. 73.699 of this chapter. Maximum facilities for TV stations operating in the UHF band are 5 megawatts effective radiated power at an antenna HAAT of 610 meters (2,000 feet).

See Sec. 73.614 of this chapter. The equivalent contour for DTV stations is based on a 41 dB[mu]V/m signal strength and the distance to the F(50,90) curve. See Sec. 73.625 of this chapter.

4.0 Process for Handling Unformed Regions

Only Region 36 has not convened at the time that the Region 20 Plan for 700 MHz is submitted for review by the Commission. Region 20 will take the following actions regarding Region 36.

A. A copy of the draft Region 20 Plan for 700 MHz has been shared with the convener for Region 36.

B. A copy of the draft Region 20 Plan in Adobe PDF format has been placed on the CAPRAD site for the review of members of Region 36.

Because Region 36 has not convened and there are no plans to convene prior to the submission of the Region 20 Plan for 700 MHz, the Region has requested a waiver of 47 CFR §90.527(a)(5).

From: Richard Matason [mailto:rmatason@wpa.net]
Sent: Friday, June 30, 2006 1:10 PM
To: cbryson@rcc.com
Subject: RE: Region 20 Plan for 700 MHz

Charles

This information is correct for Region 36.

Regards

Rich

-----Original Message-----
From: Charles Bryson [mailto:cbryson@rcc.com]
Sent: Wednesday, June 21, 2006 1:46 PM
To: Rmatason@co.westmoreland.pa.us; 'Dave Saffel'
Cc: 'Ryan, G. Edward'; wmcbride@co.pg.md.us; Gary McKelvey
Subject: Region 20 Plan for 700 MHz

Several months ago I contacted you on behalf of Region 20 and learned that Region 36 had not formed a Planning Committee for 700 MHz. Please advise if that information remains correct as Region 20 will be considering a draft of its plan on August 14 and potentially will be ready to file the Plan soon thereafter. Pursuant to the provisions of 47 CFR § 90 Subpart R, the Region must advise the Commission of adjacent Regions that have not convened at the time of submission.

5.0 Coordination with Adjacent Regions

The Regions adjacent to Region 20 are listed below:

Region 28 - Delaware, southern New Jersey, and eastern Pennsylvania
Regional Chairman
Pennsylvania - Eastern (east of Harrisburg, southern NJ and DE)
Richard R. Reynolds, State of Delaware - DTI
801 Silver Lake Boulevard
Dover, DE 19904-2407
PH: 302-739-9648
FX: 302-739-7243
Email: Richard.Reynolds@state.de.us

Region 36 - Western Pennsylvania
Regional Convener
Western Pennsylvania
Richard Matason
911 Public Safety Drive
Greensburg, PA 15601
PH: 724-600-7301
FX: 724-600-7388
Email: Rmatason@co.westmoreland.pa.us

Region 42 - Commonwealth of Virginia except cities and counties in Northern Virginia assigned to Region 20

Regional Chairman
Virginia
Tom Hanson, Emergency Communications Center
2306 Ivy Road
Charlottesville, VA 22903
PH: 434-971-1765
Email: Thomas@Albemarle.org

Region 44 - West Virginia
Regional Chairman, West Virginia
David W. Saffel
Chief Engineer
West Virginia State Police
1300 Harrison Ave.
Elkins, WV 26241
PH: 304-637-0200
FX: 304-637-0203
email: dsaffel@wvsp.state.wv.us

Preliminary contact has been made with every adjoining Region. The following is the status of the Region 20 adjoining 700 MHz Committees.

Region 28 – Convening meeting was held in 2004 and officers elected

Region 36 – Not convened

Region 42 – Committee formed and actively engaged in the creation of its Plan

Region 44 – Committee formed

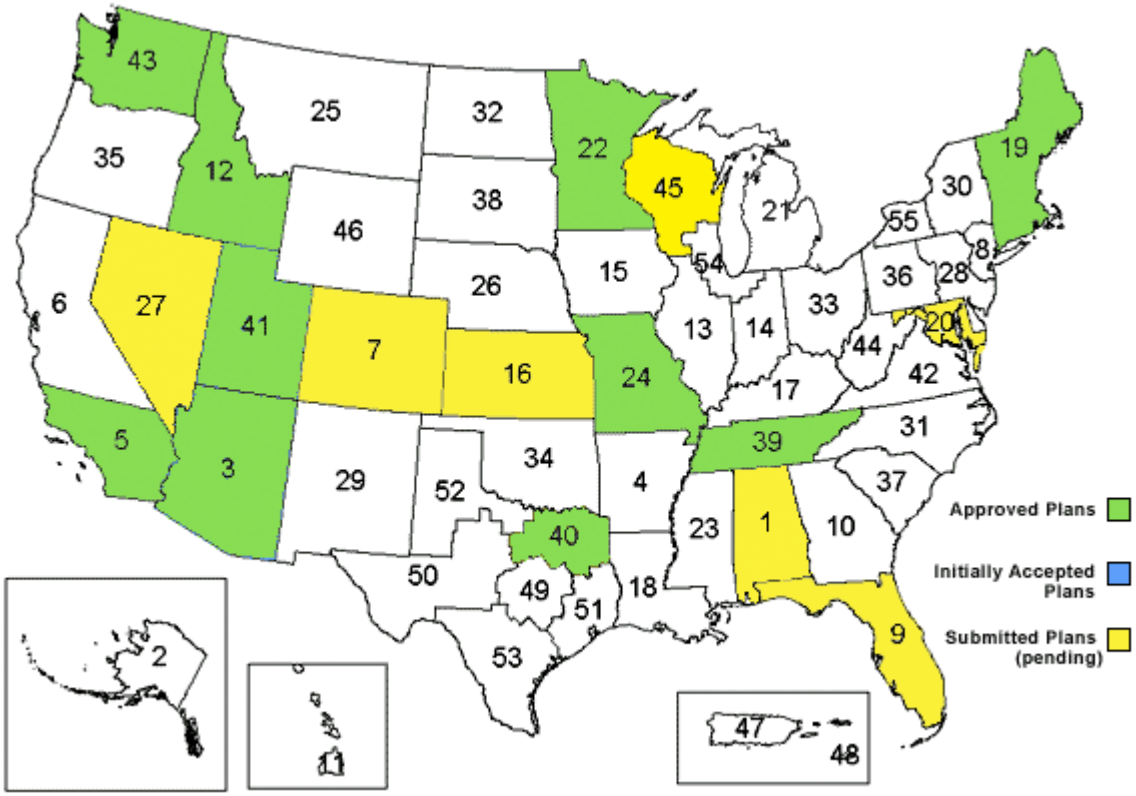


Figure 3 - Regional Planning Committees

REGION 28 - 700 MHz REGIONAL PLANNING COMMITTEE

EASTERN PENNSYLVANIA, SOUTHERN NEW JERSEY, and DELAWARE

Department of Technology & Information
Telecommunications Team
801 Silver Lake Blvd.
Dover, DE 19904-2407

Richard R. Reynolds, Chairman — **VOICE: (302) 739-9648 FAX: (302) 739-7243**
Raymond J. Hayling, II, Vice Chairman — **VOICE: (609) 984-6995 FAX: (609) 633-0557**
Laurie R. Bailey, Secretary — **VOICE: (610) 782-3087 FAX: (610) 782-3428**

June 1, 2007

Regional Planning Committee 20
Mr. G. Edward Ryan II, Chairperson
Department of Natural Resources
580 Taylor Avenue, E-4
Annapolis, MD 21401

Sent Via Email and US Mail

RE: Region 28 concurrence with Region 20's 700 MHz plan

Dear Mr. Ryan,

I am writing you in my capacity as the Chairman for Regional 28 Planning Committee.

Region 28 (Eastern PA, Southern NJ and Delaware) concurs with the Region 20 (District of Columbia, Maryland and Northern Virginia) 700 MHz plan. Region 28 has reviewed the 700 MHz Plan submitted by Region 20, and is satisfied that the plan was based on the CAPRAD Channel Assignment Model, which takes into account the necessary considerations to coordinate with adjacent regions.

Region 28 looks forward to working with Region 20 in coordination of 700 MHz and other spectrum issues in the future.

Please contact me if you have any questions on this concurrence.

Sincerely,

Richard R. Reynolds

Richard R. Reynolds, Chairman
Region 28 – 700 MHz RPC

RRR/self

Cc: Gary McKelvey, R-20 Vice Chairman - via Email only
Wayne McBride, R-20 Technical Committee Chairman - via Email only
Craig Fetzer, R-20 Operations Committee Chairman - via Email only

Charlottesville-UVA-Albemarle County
Emergency Communications Center

April 18, 2007

Mr. G. Edward Ryan II, Chairperson
Regional Planning Committee 20
Department of Natural Resources
580 Taylor Avenue, E-4
Annapolis, MD 21401

RE: Region 42 concurrence with Region 20's 700 MHz plan

Dear Mr. Ryan,

I am writing you in my capacity as the Chairman for Regional Planning Committee 42.

Region 42 (Virginia) concurs with the Region 20 (District of Columbia, Maryland and Northern Virginia) 700 MHz plan. Virginia Region 42 has reviewed the 700 MHz Plan submitted by Region 20, and is satisfied that the plan takes into account the necessary considerations to coordinate with adjacent regions.

Region 42 looks forward to working with Region 20 in coordination of 700 MHz and other spectrum issues in the future.

Please contact me if you have any questions on this concurrence.

Sincerely,

Tom Hanson

Tom Hanson, Chairman
700 MHz Committee of Region 42

cc: Gary McKelvey, Communications System Supervisor, Loudoun County VA

Region 44 – West Virginia
700 MHz Regional Planning Committee

1300 Harrison Avenue
Elkins, West Virginia 26241
304.637.0200 – V 304.637.0203. – F

November 27, 2006

G. Edward Ryan, II, Chairman
c/o Maryland Department of Natural Resources
580 Taylor Avenue, E-4
Annapolis, Maryland 21401

Dear Mr. Ryan:

My apologies for not replying to your request to review Region 20's 700 MHz plan as quickly as you desired. Our state is in the midst of an attempt to build a P-25 Trunked radio system, and that seems to take every spare moment.

The Region 44 planning committee has reviewed the Region 20 700 MHz regional plan, and concurs with it.

Sincerely,

David W. Saffel
Chairman Region 44
700 MHz Regional Planning Committee

Inter-Regional Coordination Procedures
and
Procedures for Resolution of Disputes
That May Arise Under FCC Approved Plans

I. INTRODUCTION - COORDINATION PROCEDURES

This is a mutually agreed upon Inter-Regional Coordination Procedures Agreement (Agreement) by and between the following 700 MHz Regional Planning Committees; Region 20, Region 28, Region 42, and Region 44 hereinafter known as the "Regions".

II. INTER-REGIONAL COORDINATION AGREEMENT

The following is the specific procedure for inter-regional coordination which has been agreed upon by the Regions, and which will be used by the Regions to coordinate with adjacent Regional Planning Committees.

A. An application filing window is opened or the Region announces that it is prepared to begin accepting applications on a first-come/first-served basis.

B. Applications by eligible entities are accepted.

C. An application filing window (if this procedure is being used) is closed after appropriate time interval.

D. Intra-regional review and coordination takes place, including a technical review resulting in assignment of channels.

E. After intra-regional review, a copy of those frequency-specific applications requiring adjacent Region approval, including a definition statement of proposed service area, shall then be forwarded to the adjacent Region(s) for review. [1] This information will be sent to the adjacent Regional chairperson(s) using the CAPRAD database.

[1] If an applicant's proposed service area or interference contour extends into an adjacent Public Safety Region(s), the application must be approved by the affected Region(s). Service area shall normally be defined as the area included within the geographical boundary of the applicant, plus three (3) miles. Interference contour shall normally be defined as a 5 dBu co-channel contour or a 60 dBu adjacent channel contour. Other definitions of service area or interference shall be justified with an accompanying *Memorandum of Understanding (MOU)* or other application documentation between agencies, i.e. mutual aid agreements.

F. The adjacent Region reviews the application. If the application is approved, a letter of concurrence shall be sent, via the CAPRAD database, to the initiating Regional chairperson within thirty (30) calendar days.

III. DISPUTE RESOLUTION

If the adjacent Region(s) cannot approve the request, the adjacent Region shall document the reasons for partial or non-concurrence, and respond within 10 (ten) calendar days via email. If the applying Region cannot modify the application to satisfy the objections of the adjacent Region then, a working group comprised of representatives of the two Regions shall be convened within thirty (30) calendar days to attempt to resolve the dispute. The working group shall then report its findings within thirty (30) calendar days to the Regional chairperson's email (CAPRAD database). Findings may include, but not be limited to:

A. Unconditional concurrence

B. Conditional concurrence contingent upon modification of applicant's technical parameters; or

C. Partial or total denial of proposed frequencies due to inability to meet co-channel/adjacent channel interference free protection to existing licensees within the adjacent Region

If the Inter-Regional Working Group cannot resolve the dispute, then the matter shall be forwarded for evaluation to the National Plan Oversight Committee (NPOC)[2], of the National Public Safety Telecommunications Council.

Each Region involved in the dispute shall include a detailed explanation of its position, including engineering studies and any other technical information deemed relevant.

The NPOC will, within thirty (30) calendar days, report its recommendation(s) to the Regional chairpersons via the CAPRAD database. The NPOC's decision may support either of the disputing Regions or it may develop a proposal that it deems mutually advantageous to each disputing Region.

Where adjacent Region concurrence has been secured, and the channel assignments would result in no change to the Region's currently Commission approved channel assignment matrix. The initiating Region may then advise the applicant(s) that their application may be forwarded to a frequency coordinator for processing and filing with the Commission.

[2] The Regional Plan Oversight Committee (RPOC) is a committee within the National Public Safety Telecommunications Council (NPSTC) established to arbitrate disputes between 700 MHz Regions that cannot be resolved by the impacted Regions.

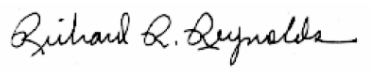
Where adjacent Region concurrence has been secured, and the channel assignments would result in a change to the Region's currently Commission approved channel assignment matrix, then the initiating Region shall file with the Commission a *Petition to Amend* their current Regional plan's frequency matrix, reflecting the new channel assignments, with a copy of the *Petition* sent to the adjacent Regional chairperson(s).

Upon Commission issuance of an *Order* adopting the amended channel assignment matrix, the initiating Regional chairperson will send a courtesy copy of the *Order* to the adjacent Regional chairperson(s) and may then advise the applicant(s) that they may forward their applications to the frequency coordinator for processing and filing with the Commission.

IV. CONCLUSION

IN AGREEMENT HERETO, Regions 20, 28, 42, and 44 do hereunto set their signatures the day and year first above written.

Respectfully,

Name of Regional Chair	Region	Date
G. Edward Ryan, II	20	
 Richard R. Reynolds	28	June 19, 2007
Tom Hanson	42	
David W. Saffel	44	

Name of Regional Chair	Region	Date
G. Edward Ryan, II	20	21 Sept 2006
Richard R. Reynolds	28	
Tom Hanson	42	4-18-07
David W. Saffel	44	

Name of Regional Chair	Region	Date
G. Edward Ryan, II	20	21 Sept. 2006
Richard R. Reynolds	28	
Tom Hanson	42	
David W. Saffel	44	15 November 2006

6.0 System Design/Efficiency Requirements

6.1 Interference Protection

Applicants are expected to design their systems for maximum signal levels within their coverage area and minimum levels in the coverage area of other co-channel users. Quality system engineering, the use of directional antennae, and the advocacy of multi-agency/multi-discipline systems that promote interoperability should be employed by applicants to accomplish this goal. An applicant's coverage area is normally the geographical boundaries of the applicant's service areas plus a three to five mile area beyond.

The Region notes the extensive use of mutual aid agreements by jurisdictions within RPC20 and will accommodate the requests of applicants for wider coverage areas when appropriate provided that any extension does not result in harmful co-channel or adjacent channel interference. When required, the Region will coordinate with an adjacent Region to ensure that an interstate or intrastate mutual aid requirement is met.

In extraordinary circumstances impacted by the need to provide wider areas of coverage to meet the potential of national, regional emergencies, or mutual aid agreements, the Region may also permit the coverage area to extend beyond the normal limits reflected in the paragraphs above provided that such extension does not cause harmful co-channel or adjacent channel interference to any licensee or potential licensee employing a channel in an identified geographical assignment within the Region 20 Plan. The Region will not permit such a level of extraordinary coverage into an adjacent Region without the expressed and written approval of the adjacent Region.

Systems should be designed for minimum signal strength of 40 dBμ in the system coverage area while minimizing signal power out of the coverage area. The methodologies included within TIA TSB88 (most recent version) will be used to determine harmful interference assuming 40 dBμ, or greater, signal in all systems' coverage areas. This may require patterned antennas and extra sites compared to a design that assumes noise limited coverage. Region 20 will comply with National Coordination Committee recommendations of the Regional Planning Committee Guidelines.

6.2 Spectrum Efficiency Standards

Initial allotments will be made on the basis of the 25 kHz channel blocks incorporated in CAPRAD and then modified as consistent with this Plan to provide 12.5 or 25 KHz blocks of channels. To maximize spectrum utilization, prudent engineering practices and receivers of the highest quality should be used in all systems. Given a choice of radios to choose from in a given technology family, agencies should use the units with the best specifications. This plan will

not protect agencies from interference if their systems are under-constructed (i.e. areas with the established service area having minimum signal strength below 40 dBu), or the systems utilize low quality receivers. The applicant's implementation of prudent engineering practices will be encouraged by Region 20 at all times.

It is the eventual goal of the FCC and the public safety community for radio equipment to meet the requirement of one voice path per 6.25 KHz of spectrum. The Region has weighted its award criteria to jurisdictions employing spectrally efficient radios as noted in Section 3.2 B of the Plan. When applying for channels within Region 20, the applicants should acknowledge the deadline for converting all equipment to 6.25 kHz or 6.25 kHz equivalent technology is 12/31/2016.

For narrowband mobile data requests, one mobile data channel will consist of two (2) 6.25 KHz channels resulting in one (1) 12.5 KHz channel. Narrowband 6.25 KHz channels can be aggregated for data use to a maximum bandwidth of 25 KHz.

As 6.25 KHz migration evolves, an applicant whose request creates any "orphaned" 6.25 KHz channels should realize that these channels will be allocated to nearby agencies requesting channels pursuant to Section 6.3 of the Plan to maintain consistent groupings and the general utilization of 12.5 or 25 KHz blocks within the Region.

In compliance with 47 CFR §90.527 (a)(6), Region 20 encourages small agencies to partner with other agencies in multi-agency or regional systems as they promote spectrum efficiency and both small and large agency capacity needs can be met. Loading criteria can also be achieved in multi-agency systems that will allow greater throughput for all agencies involved than that which could be achieved individually.

6.3 Orphaned Channels

The narrowband pool allotments within Region 20 will have a channel bandwidth of 12.5 and 25 kHz as required by the applicant. These 12.5 and 25 kHz allotments have been characterized as "technology neutral" and flexible enough to accommodate multiple technologies utilizing multiple bandwidths.

An orphaned channel may be used at another location within or proximate to the geographical area where it was originally approved, provided that it meets co-channel and adjacent channel protection (ACP) interference criteria in 47 CFR §90.543.

Region 20 will utilize the term "geographic area" as a guideline for channel implementation within Region 20. The definition of "geographic area" in this plan is the geographical/political boundaries of a given city or county, plus a distance of up to 15 miles outside of such boundaries of the geographic area of

assignment. The Region intends that this provision should be interpreted by the Technical Committee permissively with the intent to reuse channels to the greatest extent practical as consistent with the provisions of 47 CFR §90 Subpart R. If the channel, or a portion of a channel, is being moved into a "geographic area" that is within 30 miles of an adjacent Region, Region 20 will receive concurrence from the affected Region.

By extending the "geographic area" into an adjacent county or city by a designated distance, it is anticipated this will increase the possibility that orphaned channel remainders will still be able to be utilized and reduce the potential for channel remainders to be forced to lay dormant. These movements will be documented on the National Public Safety Telecommunications Council CAPRAD database by the Region 20 Technical Committee.

If the "orphaned channel" remainder does not meet co-channel and adjacent channel interference criteria by moving it within the "geographic area" as listed above, and it is determined by the Region that the "orphaned channel" cannot be utilized in the Region without exceeding the distance described above, Region 20 will submit a plan amendment to the FCC to repack the channel to a location where its potential use will maintain maximum spectral efficiency. This FCC plan amendment will require affected Region concurrence.

When in the best interest of public safety communications and efficient spectrum use within the Region, the Region 20 Regional Planning Committee shall have the authority to move orphaned channel allotments and/or co-/adjacent-channel allotments affected by the movement of orphaned channels, within its "geographic areas", which are defined above. This is to retain spectrum efficiency and/or minimize co-channel or adjacent channel interference between existing allotments within the Region utilizing disparate bandwidths and technologies.

6.4 System Implementation

With Congressional passage of the Public Law 109-171, *Deficit Reduction Act of 2005* Title III Section 3002, *Digital Television Transition and Public Safety Act of 2005* and the President's signature on the legislation, commercial broadcasting in the frequencies encompassed by 47 CFR §90 Subpart R will end no later than February 18, 2009. While at least two jurisdictions within Region 20 are currently planning for the development of 700 MHz public safety communications systems, it is unlikely that either of these applicants will have a system ready for "on-the-air" testing prior to February 18, 2009.

However, within portions of Region 20, there are geographical areas where 700 MHz systems could be currently implemented without causing prohibited interference to commercial broadcasting licensees using frequencies between ***769-775 and 799-805*** MHz.

In the event that it is applicable, the Region 20 Regional Planning Committee will utilize the National Coordinating Committee Implementation Subcommittee documentation titled "DTV Transition" that will provide the criteria which will be used, per FCC rules, to protect existing TV stations from land mobile use on 700 MHz public safety channels. Any areas in Region 20 that are capable of immediately implementing systems using any 700 MHz public safety channels will be permitted to file applications for a license.

In the event of interference to incumbent co-channel broadcasters in the Region, the implementation of systems will adhere to guidelines in 47 CFR §90.529 (b) (c). An Agency may file a request with the Regional Chairperson for an extension of time to implement. The request should include all details describing why the agency has not implemented the system and a new implementation schedule. If necessary, the Regional Chairperson will call a special meeting to determine if the allotment should be extended or if the agency should reapply to the committee for another allotment.

7. 0 Interoperability Channels

7. 1 Introduction

The ability for agencies to effectively respond to mutual aid requests directly depends on their ability to communicate with each other. Region 20 is subject to natural disasters and contains innumerable facilities, which may be susceptible to a man-made disaster or terrorist attacks. Intra and interstate mutual aid is strongly encouraged among agencies, multiple jurisdictions, and geographic regions. Three areas within Region 20 have already formed consortia of users for interoperability including the Washington, DC Council of Governments/National Capital Region as well as the Central and Eastern Shore portions of Maryland. This Plan seeks to facilitate the communications necessary for effective mutual aid.

Both the State of Maryland and Commonwealth of Virginia have formed Statewide Interoperability Executive Committees (SIEC) under National Coordination Committee's (NCC) guidelines and will administer the applicable 700 MHz interoperability channels. The Region 20 700 MHz Regional Planning Committee will work with the relevant Statewide Interoperability Executive Committee as needed. If at any time the State's SIEC is unable to function in the role of administering the interoperability channels in the 700 MHz band, the Region 20 700 MHz Committee will be prepared to assume this role if requested by the relevant SIEC and notify the FCC in writing of the change in administrative duties.

Selection of Radios and Programming of Interoperability Channels

As required by 47 CFR § 90.547 (Narrowband Interoperability channel capability requirement) except as noted in Subpart R, mobile and portable transmitters operating on narrowband channels in the 769-775 MHz and 799-805 MHz frequency bands must be capable of operating on all of the designated nationwide narrowband Interoperability channels pursuant to the standards specified in 47 CFR§ 90.548 .

7.2 Tactical Channels

At this time, Region 20 will not set aside additional channels for interoperability use within the Region other than as stated in the Plan. It is anticipated the sixty-four FCC designated interoperability channels (6.25 KHz) will be sufficient to provide interoperability (voice and data) within Region 20. However, the Commonwealth of Virginia and/or State of Maryland may develop a broader plan for interoperability until the direction of its SIEC and may request amendments to the Region 20 plan for channels to facilitate future plans.

All mobile and portable units operating under this Plan and utilizing 700 MHz

channels must be programmed with the minimum number of channels called for either in NCC guidelines or as the relevant Statewide Interoperability Executive Committee specifies. The channel display in these radios will be in accordance with the NCC guidelines that have common alphanumeric nomenclature to avoid any misinterpretation of use within Region 20. The relevant SIEC is the final authority on the interpretation of the distribution of the 700 MHz interoperability channels.

7.3 Deployable Systems

In this Plan, Region 20 supports use of deployable systems, both conventional and trunked. Deployable systems are prepackaged systems that can deploy by ground or air to an incident to provide additional coverage and capacity on designated 700 MHz interoperability channels and/or agency specific General Use Channels. This will minimize the expense of installing extensive fixed infrastructure in areas while still providing mission critical functionalities as the Region recognizes the difficulty of providing complete coverage in all areas due to financial, demographic, and geographical constraints.

Agencies should have conventional deployable systems capable of being operated on any of the FCC designated/NCC recommended interoperability tactical channels. The agencies that are part of a multi-agency trunked system and commonly provide mutual aid to each other are encouraged to have trunked deployable systems that operate on the tactical channels designated by the FCC for this use. The relevant SIEC will develop the operational details for deploying these systems.

It is expected that the tactical channels set aside for trunked operation will be heavily used by deployable systems. Therefore, the tactical channels cannot be assigned to augment general use trunked systems.

7.4 Monitoring of Interoperability 700 MHz Calling and Tactical Channels

It is not anticipated that there will be any 700 MHz systems in operation within Region 20 and many parts of the middle Atlantic portion of the United States until after February 18, 2009. Even after this date, the vast majority of land mobile radio systems operating on channels above ***769*** MHz will be in the older 800 MHz band. For the immediate future, Region 20 believes that it is appropriate for any new licensees using 700 MHz frequencies to monitor and have access to the current channels identification by the National Public Safety Planning Advisory Committee (NPSPAC) in the 800 MHz band.

Accordingly and until amended by the Region or superseded by order of the Commission, Region 20 will require applicants to install fixed network transceivers capable of monitoring the NPSPAC 800 MHz calling and four (4) tactical channels. Applicants may utilize a central agency to monitor the

NPSPAC calling channel on their behalf. As an example and in Maryland, the State's Emergency Management Agency (MEMA) may monitor the 800 MHz and eventual 700 MHz interoperability calling channel on behalf of a jurisdiction and assign callers to specific frequencies for inter-agency operations. Users not assigning the monitoring of an interoperability calling channel to an appropriate entity shall be responsible for the monitoring of the call frequency.

Notwithstanding the other provisions of this section of the Plan, Region 20 may supplement the four (4) traditional NPSPAC tactical channels in 800 MHz with additional tactical channels in the 700 MHz band as provided by the Commission or the relevant SIEC.

8.0 Future Planning – from 47 CFR §90.531 (a)(7)

The initial process of assignments will be known as Window One. In this window, the CAPRAD pre-coordination database will be employed as the initial basis of channel allotments for geographical areas within Region 20, including the independent cities using criteria such as current population, 2000 Census data, height above average terrain (HAAT), and public safety use curves generated by the Public Safety Wireless Advisory Committee (PSWAC) to provide spectrally efficient frequency allotments.

In Window One, all channels identified in this Plan will be available to applicants operating in the geographical areas as found in Appendix G. In addition, channels may be provided to an applicant pursuant to the provisions of this Plan as found in Sections 3.11 and 6.3 of the document.

Applications for channels shall be submitted to the Technical Committee and reviewed by the Regional Committee for vote at the next scheduled meeting.

The initial window will be open from time of Commission approval of the Plan and further from that date, for a period of three (3) years. Three (3) years after the approval of the Plan by the Commission, Window One will close.

Channel allocations as approved by the Region 20 Technical Committee will be updated and maintained within the CAPRAD database.

8.1 Windows of Future Channel Assignments

In the future, Region 20 will issue channels in 700 MHz under a continual process in which there will be a second filing windows for applicants. This window for applications will be known as Window Two and will become effective upon the expiration of Window One.

When Window Two opens in the future, any channel in any geographical area not assigned to a licensee becomes open and available to any other applicant provided that no harmful co-channel and/or adjacent channel user is created through a reassignment of the channel. As an integral part of the Plan, any orphan channels will be identified and reassigned pursuant to the provision of Section 6.3 of this Plan.

8.2 Review of the Plan's Effectiveness

As a standing agenda item for every meeting of Region 20, the Chair of the Technical Committee shall provide a report to the membership detailing the use of the spectrum and any administrative or operational issues arising from this Plan. In addition, the meeting Chair shall invite comments from members and any other persons in attendance at meetings relative to the effectiveness of the Plan.

At any time in which the Region Chair or the Chair of the Technical or Operations Committees has reason to believe that a provision of the Plan is adversely affecting public safety communications within Region 20, any Chairperson or Vice Chairperson operating in their absence has an affirmative responsibility to report the issues to the appropriate Committee for immediate attention.

Upon review of the reported conflict no later than sixty (60) days after the initial allegation; the appropriate Chair shall report the Committee's findings to the Region 20 Chairperson. The Region 20 Chairperson shall review the findings of the Committee reviewing the allegation. Depending upon the findings of the Chairperson of Region 20, one of three possible outcomes will be initiated.

A. Allegation Unfounded – No further action is Required. The person reporting the alleged issue shall be informed of the Region's decision.

B. Allegation Founded – Immediate Action not Required. When there is an affirmative finding of a problem with the Region's Plan and the matter can be appropriately deferred until placed on the agenda of the next meeting, the deferral of action is appropriate.

C. Allegation Founded – Immediate Action Required. When the Chairperson of Region 20 finds that a provision of the Plan is causing or may cause adverse impact to an applicant or potential applicant, the Chairperson may take executive action and grant relief by temporarily suspending a provision of this Plan until a Regional Meeting can be called. In the event that executive action is taken and a provision of this Plan is suspended, the effective period of suspension shall not extend beyond sixty (60) days unless ratified by the Region at a meeting called in response to the Chairperson's findings and executive action.

8.3 Inter-Regional Dispute Resolution Process

In the event that a dispute arises between Region 20 and an adjacent Region or Regions, regarding spectrum allocations or implementation that cannot be resolved within 60 days, the parties to the dispute will request a hearing by the National Regional Planning Oversight Committee.

8.4 Modifications to the Plan – from 47 CFR §90.527 (b)

In recognition that there will be amendments made to the Plan, the bylaws of the Region 20 700 MHz Planning Committee incorporate provisions permitting the amendments as may be necessary.

The Region 20 Plan will be modified when required by submitting a written request, signed by the regional planning committee, to the Chief, ~~Wireless Telecommunications~~ ***Public Safety and Homeland Security*** Bureau. The request will contain the full text of the modification, and certify that successful coordination of the modification with all adjacent regions has occurred and that all such regions concur with the modification.

9.0 Certification – from 47 CFR §90.531 (a)(8)

Pursuant to the provisions of 47 CFR §90.531 (a)(8), I hereby certify that all planning committee meetings, including subcommittee or executive committee meetings were open to the public. A summary of the deliberations of the Committee pursuant to adopting this Plan can be found in Appendix D, in the minutes of the Regional Planning meeting.

I further certify that the amendments included herein have been adopted by the Region's members within thirty (30) days of August 10, 2007, pursuant to the provisions established by the Commission in ¶346 of the Second Report and Order to Docket WT 96-86.

G. Edward Ryan, II

_____

G. Edward Ryan, II, Chairperson, Region 20

August 29, 2007

_____

Date

Appendices

Appendix A	**Region 20 By-laws**
Appendix B	**List of Region 20 Members, Agencies, Contact Information, and Voting Status**
Appendix C	**Independent Cities and Counties in Region 20**
Appendix D	**List of Region 20 700 MHz Planning Meeting Minutes and Minutes of the Planning (Technical) Committee**
Appendix E	**Interoperability Nomenclature for Channel Assignments**
Appendix F	**Rules for the Assignment of Channels**
Appendix G	**Assignment of Channels**
Appendix H	**Resolution of Inter-Regional Disputes**
Appendix I	**Notification to Low Power Television Stations in Affected Channels**
Appendix J	**Dispute Resolution Form**

Appendix A - Bylaws of Region 20

INTRODUCTION

1.1 Authority to Form. The authority to formulate this body is found in 47 CFR §90.527.

1.1.1 Name and purpose. The name of this Region shall be Regional Planning Committee Number Twenty and shall be commonly referred to as "Region 20". Its primary purpose is to foster and promote cooperation, planning, development, and evolution of Regional Plans and the implementation of these plans in the 700 MHz Public Safety Band within the State of Maryland, the District of Columbia, and the northern counties of the Commonwealth of Virginia and the independent cities of the Region.

1.2 Membership. There are three classes of membership within Region 20. These classes are defined below.

1.2.1 **Voting Member**. The voting membership shall be apportioned as follows. One representative from each county in Maryland and the City of Baltimore; one representative from each County and the City of Alexandria in the Commonwealth of Virginia; seven persons representing Maryland; seven persons representing the Commonwealth of Virginia state government; and seven representatives from the District of Columbia.

1.2.1.1 Substitutions. A voting member may waive his or her right to vote and designate an alternate if the voting member is unable to attend a meeting or declares a conflict of interest to a question before the Region.

1.2.1.2 Temporary Suspension of Voting Privilege. The Chair of the Region may temporarily suspend the voting rights of a voting member if the Chair identifies that the voting member has a conflict of interest. The suspension of the voting right shall be declared for individual questions before the Region. Upon completion of the question for which the voting privilege of a member was temporarily suspended, the voting rights of the voting member shall be restored fully.

1.2.1.3 Identification of a Substitute. If the Chair of the Region declares a conflict of interest and suspends temporarily the voting rights of a member, the member whose vote was suspended may appoint another person to vote in his or her place. Absent the continuing conflict of interest, the Chair shall recognize the substitute as the voting member for the licensee.

1.2.1.4 Appeal of Temporary Voting Suspension. If the Chair of the Region intends to temporarily suspend the voting rights of a member, the member may immediately appeal to the Region to overturn the intended ruling of the Chair. In the event of such appeal, the Chair and the voting member will each have five (5) minutes to address the membership. At the conclusion of discussions, the Chair shall immediately call for a vote to affirm the decision of the Chair. A simple majority is required to affirm the decision of the Chair.

1.2.2 Non-voting member. Any employee or volunteer representing an eligible licensee or state government organization may attend meetings and subject to the discretion of the Chair, be permitted to speak to any issue before the membership.

1.2.3 Non-voting member agent. Any licensee or state governmental organization may permit a consultant or other advocate for the licensee to participate in meetings on a non-voting basis. The non-voting member agent shall enjoy the rights and privileges of any other non-voting member. A consultant under retainage by a licensee or state government organization shall be deemed to be a de facto non-voting member agent.

GENERAL MEMBERSHIP ADMINISTRATION

2.1 Joining and Continuing Membership in Region 20. The Region 20 700 MHz Regional Planning Committee shall add members at annual, special, or regular meetings. To become a member of Region 20 700 MHz Regional Planning Committee, a representative simply has to attend a meeting. See attendance and voting rights procedures below. Once admitted, members are expected to regularly attend meetings.

2.2 Tenure. Except as provided in Section 2.4 of these By Laws, each member shall hold membership from the date of acceptance until resignation or removal.

2.3 Powers and Rights. In addition to such powers and rights as are vested in them by law, or these bylaws, the members shall have such other powers and rights as the membership may determine.

2.4 Suspension of Voting Rights and Removal. Region 20 will hold such meetings as required by 47 CFR Part 90. To retain consistent voting rights, members should attend no less than one (1) meeting in a 24-month period. After the acceptance of this Regional Plan, voting members that do not attend one meeting in a 24-month period (starting on the date of plan acceptance) will lose Region 20 voting rights until restored by the Chairperson or the Vice Chair in the absence of the Chair.

2.4.1 Membership Suspension. A representative may be suspended or

removed with cause by vote of a majority of members attending a meeting after reasonable due process notice of such meeting has been issued to all members including the person subject to removal or suspension. Due process procedures are described below.

2.4.1.1 Before suspension or removal, the person subject to suspension or removal shall be afforded a reasonable opportunity to be heard and may call any witnesses with relevant information pertaining to the causation of suspension or removal.

2.4.1.2 If witnesses with relevant information are to be called, the names of such witnesses and a synopsis of their relevant testimony shall be provided to the Chairperson or Vice Chair in the absence of the Chair at least fourteen (14) calendar days prior to the meeting in which the suspension or removal will be considered by the members. The Chairperson or Vice Chair in the absence of the Chair shall be the sole determinant of evidence relevancy.

2.4.2 Committee Action. A vote of the committee is the final determining factor regarding removal a member from Region 20. A period of 6 months from the first day of removal is required before a removed member is eligible for reinstatement for membership in the Regional Planning Committee.

2.4.3 Immediate Removal of Persons. Nothing in this section shall prohibit the Chairperson or the Vice Chair in the absence of the Chair from ordering the immediate removal of any person whose conduct is disruptive to the meeting of the Region.

2.5 Resignation. A member may resign by delivering written resignation to the Chairperson or Vice Chairperson of the Regional Committee or to a meeting of the members. A resigning member is eligible for reinstatement to the Regional Planning Committee after a period of six months has lapsed, beginning on the first day of resignation.

2.6 **Meetings.** After Regional Plan approval, the Region 20 700 MHz Planning Committee will meet as required by 47 CFR Part 90. The location of meetings will be held at various locations throughout the Region to minimize the travel time of the members. All meetings shall be open to the public. The Operations Committee is also responsible to ensure that public notices of any Regional Planning Committee meetings are included in appropriate publications and that any eligible Native American tribe is notified of meetings.

2.7 Special Meetings. The Chairperson has the authority to call a meeting of the Regional Planning Committee when it is deemed to be it in the best interest of the Region or in compliance with Section 2.4.1 of these By Laws and will provide notice of the special meeting to existing members of the Region (and the

public) at least 30 days prior to the meeting. Special meetings of the members may be held at any time and at any place within the Region. Special meetings of the members may be called by the Chairperson or by the Vice Chair, or in case of death, absence, incapacity, by any other officer or, upon written application of two or more members.

2.8 Call and Notice.

2.8.1 Reasonable notice of the time and place of scheduled meetings of the members, not being less than 30 days, shall be given to each member. Such notice may specify the purposes of a meeting, but will specify meeting content if required by law or these bylaws or unless there is to be considered at the meeting (i) amendments to these bylaws or (ii) removal or suspension of a member who is an officer. Announcements of meetings, stating the time and place where the meeting is to be held may be published in newspapers and land mobile radio periodicals. In addition, a press release may be issued informing parties interested in public safety communications to attend. Region 20 will notify the Federal Communications Commission, Chief of the Wireless Telecommunications Bureau, when a meeting time and place has been established for the Region 20 700 MHz Regional Planning Committee.

2.8.2 Except as otherwise expressly provided, it shall be reasonable and sufficient notice to a member to send notice by mail or e-mail/facsimile at least thirty days before any special meetings, addressed to such member at his or her usual or last known business address, or, to give notice to such member in person or by telephone at least thirty days before the meeting.

2.9 Quorum. At any meeting of the members, the attendance of at least one officer and a minimum of at least ten (10) voting members shall constitute a quorum. Any meeting may be adjourned to such date or dates not more than ninety days after the first session of the meeting by a majority of the votes cast upon the question, whether or not a quorum is present, and the meeting may be held as adjourned without further notice.

2.10 Action by Vote. When a quorum is present at any meeting, a majority of the votes properly cast by voting members present shall decide any question, including election to any office, unless otherwise provided by law or these bylaws. In the event of a tie vote, the Chair, or the Vice Chair in the absence of the Chair, may decide the issue.

2.11 Action by Writing. Any action required or permitted to be taken at any meeting of the members may be taken without a meeting if all members entitled to vote on the matter consent to the action in writing and the written consents are filed with the records of the meetings of the members. Such consents shall be treated for all purposes as a vote at a meeting.

2.12 **Proxies.** Voting members may vote either in person or by written proxy dated not more than thirty (30) days before the meeting named therein, which proxies shall be filed before being noted with the secretary or other person responsible for recording the proceedings of the meeting**.** No voting member shall cast more than three proxies in addition to his or her vote. A voting member present via teleconference (audio, Internet, or video) shall have voting status parallel to a member present at the meeting. If the facility is unable to accommodate teleconferencing (audio, Internet, or video), or for any other reason teleconferencing cannot be accommodated in the meeting place, it is the responsibility of the member to attend the meeting in person or to vote by written proxy to have full voting rights. Unless otherwise specifically limited by their terms, such proxies shall entitle the holders thereof to vote at any adjournment of the meeting for which the proxy exists and the proxy shall terminate after the final adjournment of such meeting.

2.13 **Voting on One's Own Application**. At no time can a voting member vote on his/her application.

2.14 **Conflict of Interest.** A voting member cannot have a commercial interest in any of his/her Region and/or adjacent Region's application(s) on which he/she is reviewing, approving and/or voting. The Chair, Vice Chair, or any member can allege that a voting member has a conflict of interest and demand a vote of the membership relative to the legitimacy of the allegation of conflict of interest. The determination of a conflict of interest shall be determined by a vote of the membership with a simple majority of attendees confirming the conflict.

OFFICERS AND AGENTS

3.1 **Number and qualification.** The officers of the Region 20 700 MHz Regional Planning Committee shall consist of a Chairperson, a Vice Chairperson and a Secretary. All officers must be voting members of the Regional Committee.

3.2 **Election.** The officers shall be elected by the voting members at the convening meeting and, thereafter, at a meeting determined by the membership. The terms of the officers in the Region 20 700 MHz Regional Planning Committee will be for two (2) years.

3.3 **Tenure.** The officers shall each hold office until the election meeting of the members held within two years from the date of 700 MHz Regional Planning Committee convening meeting, or until their successor, if any, is chosen, or in each case until he or she sooner dies, resigns, is removed or becomes disqualified.

3.4 **Chairperson and Vice Chairperson.** The Chairperson shall be the chief executive officer of the Regional Committee and, subject to the control of the voting members, shall have general charge and supervision of the affairs of the Regional Committee. The Chairperson shall preside at all meetings of the

Regional Committee. The Vice Chairperson shall have such duties and powers as described in the by-laws plus any additional powers that the voting members shall determine. The Vice Chairperson shall have and may exercise all the powers and duties of the Chairperson during the absence of the Chairperson or in the event of his or her inability to act.

3.5 **Secretary.** The Secretary shall record and maintain records of all proceedings of the members in a file or series of files kept for that purpose, which file or files shall be kept within the Region and shall be open at all reasonable times to the inspection of any member. Such file or files shall also contain records of all meetings and the original, or attested copies, of bylaws and names of all members and the address (including e-mail address, if available) of each. If the Secretary is absent from any meeting of members, a temporary Secretary chosen at the meeting shall exercise the duties of the secretary at the meeting. In the absence of a Secretary within the Region 20 700 MHz Planning Committee, the Chairperson shall assign Region 20 Secretary duties as deemed necessary.

3.6 **Suspensions or Removal.** An officer of the Region 20 Regional Planning Committee may be suspended with cause by vote of a majority of the voting members in attendance pursuant to the provisions of Section 2.4 of the by-laws.

3.7 **Resignation.** An officer may resign by delivering his or her written resignation to the Chairperson, Vice Chairperson, or Secretary of the Regional Committee. Such resignation shall be effective upon receipt (unless specified to be effective at some other time), and acceptance thereof shall not be necessary to make it effective unless it so states.

3.8 **Term Limits.** To promote opportunities for leadership of the Region, no person shall hold the office of Regional Chairperson or Vice Chairperson for more than two consecutive terms. In the absence of nominations for a qualified candidate, this section of the By-Laws shall be waived.

3.9 **Vacancies.** If the office of any officer becomes vacant, the voting members may elect a successor. Each such successor shall hold office for the remainder terms and in the case of the Chairperson, Vice Chairperson, and secretary, until his or her successor is elected and qualified, or in each case until he or she sooner dies, resigns, is removed or become disqualified.

COMMITTEES

The Chair may appoint such committees as are deemed necessary to conduct the business of the Region. Each committee shall be charged with specific responsibilities by the Chair.

4.1 **Chair**. Each Committee shall be lead by a Chairperson who shall be appointed by the Regional Chair. In addition, the Committee Chair may request a Vice-Chairperson. Vice-Chairpersons shall be appointed by the Regional Chair.

4.2 **Nomination of Committee Chairperson**. Whenever practical, the Regional Chair shall seek nominations from the membership prior to making appointments as Committee Chair or Vice Chairs.

4.3 **Geographical Diversity**. In either calling for nominations of Committee Chairs or Vice Chairs as well as the general membership of a Committee, the Regional Chair shall seek geographical diversity that ensures that no portion of the Region can exert such influence as to be detrimental to another portion of Region 20.

4.4 **Committee Support**. At the discretion of the Committee Chair, the work of the Committee may be supported by a non-voting member agent as defined in Section 1.2.3 of the By Laws.

4.5 **Tenure of Committees**. There shall be two types of Committees, continuing and non-continuing as defined below.

4.5.1 **Continuing Committees**. A Continuing Committee is one whose duties and responsibilities are required throughout the life of Region 20. Continuing Committees for Region 20 include:

4.5.1.1 Operations. The Operations Committee considers amendments to By Laws as well as other administrative matters as referred to it by the Regional Chair or Vice Chair. The Operations Committee is responsible for establishing the dates and locations of future meetings as well as any recommended actions relative to the membership.

4.5.1.2 Technical. The Technical Committee considers all requests for channels and regulatory issues that will subsequently be referred to the FCC from the Region. This includes reviews of any matters from the adjacent regions including adoption of or modification to the RPC Plan.

4.5.2 **Non-Continuing Committees**. This is a Committee appointed by the Regional Chair or in his or her absence by the Vice Chair. A Non-Continuing Committee is formed for a specific purpose. The longevity of the Committee is commensurate with the duties as conferred by the Chair or Vice Chair and upon completion of its work; the Non-Continuing Committee shall be dissolved.

MEETINGS

Any meeting of the Region or one of its Committees is open to the public. There are no provisions under 47 CFR §90.527 (a)(8) to exclude any person from any type of meeting held under the auspices of Region 20.

AMENDMENTS

These bylaws may be altered, amended or repealed in whole or in part by vote. The voting members may by a two-thirds vote of a quorum, alter, amend, or repeal any bylaws adopted by the Regional Committee members or otherwise adopt, alter, amend or repeal any provision which FCC regulation or these bylaws requires action by the voting members. Proposed amendments to the By-Laws shall be identified and included in the Notice of Meeting no less than thirty (30) days prior to such meeting. Any changes in the Plan's By-Laws shall not become effective until approved by the FCC.

DISSOLUTION

This Regional Committee may be dissolved by the consent of two-thirds plus one of an assembled quorum of the membership at a special meeting called for such purpose. The FCC shall be notified. Proposed Dissolution shall be identified and included in the Notice of Meeting no less than thirty (30) days prior to such meeting. Any changes in the Plan's By-Laws shall not become effective until approved by the FCC.

RULES OF PROCEDURES

The Conduct of Regional Meetings including without limitation, debate and voting, shall be governed by Robert's Rules of Order, newly revised 1990 edition, ninth edition, Sarah Corbin Robert, Henry M. Robert III, and William J. Evans.

Appendix B - Original Region 20 Member List and Contact Information

NAME	ORGANIZATION	ADDRESS	CITY		
Adams, William E	Frederick Co Dept of Emerg Comm.	340 Monteroe Lane	Frederick	MD	21702
Bohn, Richard	State of Md/Dept of Budget & Management	301 W. Preston St	Baltimore	MD	21201
Bowers, Wayne Logan	Maryland State Police	7755 Washington Blvd	Jessup	MD	20794
Boyles, Ken	CIA	1F0701 OHB	Washington	DC	20505
Bumgarner, Richard O.	Alexandria Police Dept	2003 Mill Rd	Alexandria	VA	22314
Burns, Louis F (Rick)	St. Mary's County Sheriff	Tuder Hall Drive	Leonardtown	MD	20650
Cooper, Phillip R.	St Mary's Co Emergency Communications	23090 Leonard Hall Dr PO Box 653	Leonardtown	MD	20650-0653
Crist, Ernie	Harford Co Emer Operations	2220 Ady Road	Forest Hill	MD	21050
Curry, William (Bill)	DC-Emergency Management Agency	2000-14th Street N.W. 8th Floor	Washington	DC	20009-4473
Dawson Jr., Purvis L 1st Lt	Fairfax Co Police Dept	3911 Woodburn Rd	Annandale	VA	22003
DeHoff Jr, William C.	Anne Arundel Co Gov	2660 Riva Road, 3rd floor	Annapolis	MD	21401
Dennis, Charles C.	Baltimore County ES/T	11112 Gilroy Rd Suite 101	Hunt Valley	MD	21031
Dugan, Bill	Sheriff Office Fauquier Co	78 West Lee St	Warrenton	VA	20186
Eierman, David	Motorola	7230 Parkway Dr	Hanover	MD	21076
Fetzer, Craig	Md Dept of Transportation(SHA)	5901 Baltimore National Pike	Baltimore	MD	21228
Goodman, David M	MTA	1515 Washington Blvd	Baltimore	MD	21230
Harris, Judy	Reed Smith	1301 K. Street NW	Washington	DC	20815
	Nextel	17 Squire Court	Reisterstown	MD	21136

Hyatt, Marty					
Jackson Jr.,Andrew L	DC Gov Emerg Management Agency	2001 14th St, NW-Reeves Ctr, 8th fl	Washington	DC	20009
King, Jeffery G	Howard Co Fire & Rescue	6751 Gateway Dr	Columbia	MD	21046
McBride, Wayne	Prince George's County Communications	7911 Anchor Street	Landover	MD	20735
McNeal, Tim	Talbot Co Emer Management	605 Port St	Easton	MD	21601
McKelvey, Gary	Loudoun County	41975 Loudoun Center Place	Lees Burg	VA	20175
Marshall, Steven R	Somerset Co Dept of Emer Services	11916 Somerset Avenue	Princess Anne	MD	21853
Meier, Craig L	Baltimore City PD	601 E. Fayette St	Baltimore	MD	21202
Miller, Thomas H	Md Inst for Emer Med Services(MIEMSS)	653 W. Pratt St	Baltimore	MD	21201
Paterm, Mark	Howard Co Police Dept	3410 Court House Drive	Ellicott City	MD	21043
Patullo, Charles F	Mont Co Fire & Rescue	120 Maryland Ave 3rd floor	Rockville	MD	20850
Petry, Lt. Richard	Baltimore Co Fire Dept	700 E. Joppa Rd	Towson	MD	21286
Raynor, Katherine	MdTA	1200 Frankfurst Ave	Baltimore	MD	21226
Redman, Buddy	Carroll Co Office of Public Safety	225 N. Center St	Westminster	MD	21157
Remaniak, David	Queen Anne's Co, DPW	P.O. Box 56	Centreville	MD	21617
Rust Jr, Robert B	Kent Co MD EMA	104 Vickers Drive Unit D	Chestertown	MD	21620
Ryan II G. Edward	Md Dept of Budget & Management	301 W. Preston St, Suite 1304	Baltimore	MD	21201
Shahnami, Ali	ACD Telecom Inc	785 Glenwood Dr	Lake Mary	FL	32746
	Calvert Co Public Safety	175 Main St	Prince Frederick	MD	20678

Short, Bob					
Sinclair, Jim	TRW Systems	12011 Sunset Hills Rd	Reston	VA	20190
Sobecke, James B	Graduate Student (George Washington U)	8820 Victoria Rd	Springfield	VA	22151
Standiford, Charles K	Baltimore Co Police Dept	3041 Fourth Ave	Baltimore	MD	21234
Sines. Stanley A "Al"	Metro Police Dept Washington DC	15808 Wayne Ave	Laurel	MD	20707-3256
Sura, Donald J(Lt Michael Bennett)	Md State Police Electronic Services	7755 Washington Blvd	Jessup	MD	20794
Turk, James E	Federal Emergency Management(FEMA)	19844 Blue Ridge Mountain Rd	Bluemont	VA	20135
Vershou, Simon	MdTA	2301 S. Clinton St	Baltimore	MD	21224
Walker, Michael	Nextel-Corporate Strategy	1753 E. Joppa Rd	Baltimore	MD	21212
Wallace, Theodore H	Cecil County	129 E Main St, Co Courthouse, Suite 6	Elkton	MD	21921
Wise, David	Howard Co Dept of Technology	3430 Court House Dr	Ellicott City	MD	21043

Appendix B-1 Region 20 Membership at Time of Completion of the 700 MHz Plan

Name	Agency	Business Address	Phone	Email
Frank Aghili (NV)	OCTO/NCR Program	441 4th St., NW, Suite 930S Washington, DC 20001	(202) 442-4272	Frank.aghili@dc.gov
Jack Anderson (NV)	Fairfax County, VA (RCC)	2248 Richelieu Drive, Vienna, VA 22182	(703) 573-5863	jack.anderson@fairfaxcounty.gov
Noel Armstrong	Virginia State Police	7700 Midlothian Turnpike Richmond, VA 23235	(804) 674-2689	noel.armstrong@vsp.virginia.gov
David "Duff" Barney	Fairfax County, VA	12000 Government Center Parkway, Fairfax, VA	(703) 324-3833	david.barney@fairfaxcounty.gov
Michael E. Bennett	Maryland State Police	7755 Washington Blvd, Jessup, MD 20794	(410) 799-3466	mbennett@mdsp.org
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Charles Bryson (NV)	Prince George's County (RCC)	7911 Anchor Street, Landover, MD 20785 2809 Emerywood Parkway Suite 505, Richmond, VA 23294	(804) 301-1123Cell (804) 422-8460Office	cbryson@rcc.com
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Louis Burris	St. Mary's Sheriff's Dep't.	23115 Leonard Hall Dr. Leonardtown, MD 20650	301-475-4200 x1980	Louis.burris@co.saint-marys.md.us
Bill Butler (NV)	National Capital Region Program	441 4th St., NW, Suite 930S Washington, DC 20001	(202) 442-4933	William.butler@dc.gov
Timothy Cameron	St. Mary's County, MD Emer. Comm.	23115 Leonard Hall Dr. Leonardtown, MD 20650	301-475-4200 x2111	Tim_cameron@co.saint-marys.md.us
Bryan Casey	National Capital Region Program	441 4th St., NW, Suite 930S Washington, DC 20001	(202) 442-4982	Bryan.Casey@dc.gov
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John Contestable	MDOT/Comm. Interoperability	7201 Corporate Center Drive Hanover, MD 21076	(410) 865-1120	jcontestabile@mdot.state.md.us

Shirley Copado	St. Mary's County Emergency Comm.	23115 Leonard Hall Dr. Leonardtown, MD 20650	(301) 475-4200 X2120	shirley.copado@co.saint-marys.md.us
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Gary D. Davis, Jr.	Maryland State Police	7755 Washington Blvd, Jessup, MD 20794	(410) 799-3466	gddavis@mdsp.org
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Chris Essid	Governor's Office, Comm. of Virginia	1111 East Broad Street Richmond, Virginia 23219	(804) 225-3800	chris.essid@governor.virginia.gov
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David Goodman	Maryland MTA	6 St. Paul St | Baltimore, MD. 21202-1614	(410) 454-7062	dgoodman@mdot.state.md.us
Linda Goodridge	Stafford County, VA	1300 Courthouse Rd Stafford, VA 22554	(540) 658-4408	lgoodridge@co.stafford.va.us
Kyung Chul Heou	Joint Forces HQ-NCR	Unavailable	(202) 685-6142	Kyung.heou@jfhqncr.northcom.mil

Paul Hoppes	Comm. Of VA. VITA	110 S. 7th St 3rd Floor Richmond, VA 23219	(804) 371-5580	paul.hoppes@vita.virginia.gov
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Derek Kelly	MWAA	1 Aviation Circle, MA-630 Washington, DC 20001	(703) 417-3492	derek.kelly@mwaa.com
David C. King	District of Columbia	310 McMillan Dr. NW, Washington, DC 20001	(202) 673-3792	davidc.king@dc.gov
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Jack Markey	Frederick County, MD	340 Montevue Lane, Frederick, MD 21702	(301) 694-1418	jmarkey@fredco-md.net
Steven Marshall	Somerset County Emer. Management	11916 Somerset Avenue, Princess Anne, MD 21853	(410) 651-0707	smarshall@co.somerset.md.us
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Teresa Owens	Worcester County, MD	1 W. Market Street, Rm. 1002, Snow Hill, MD 21863	(410) 632-3080	towens@co.worcester.md.us
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Bette Rinehart (NV)	Motorola	28 Twin Lakes Dr., Gettysburg, PA 17325	717-334-0654	c18923@email.mot.com
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Tony W. Rose	Charles County Emergency Serv.	10425 Audie Lane La Plata, Maryland 20646	(301) 609-3550	roset@charlescounty.org
Joe Ross (NV)	National Capital Region	441 4th St., NW, Suite 930S Washington, DC 20001	(202) 448-9838	Joe.ross@dc.gov
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Charles Sandiford	Baltimore County PD	3041 Fourth Ave, Baltimore, MD 21234	410-887-4957	cstandiford@co.ba.md.us

Darla Smith (NV)	Maryland State Police	7755 Washington Blvd, Jessup, MD 20794	(410) 799-3466	dsmith@mdsp.org
Ken Smith	Kent County, MD	104 Vickers Dr., Unit D Chestertown, MD 21620	(410) 778-7472	ksmith@kentgov.org
James Sobecke	George Washington Univ. (Academic)	8820 Victoria Rd, Springfield, VA 22151	(703) 284-8113	jsobecke@gwu.edu
Sam Sommers	Prince William County, VA	4355 Ridgewood Center Drive Woodbridge, VA 22192-5308	(703) 792-6172	ssommers@pwcgov.org
Ron Strobel	Anne Arundel County, MD	8501 Veterans Hwy Millersville, MD 21108	(410) 222-8391	fdstrobe@aacounty.org
Thomas Struzzieri	Virginia State Police STARS	Post Office Box 27472 Richmond, Virginia 23261	(804) 674-4684	Thomas.Struzzieri@VSP.Virginia.gov
Jim Stoneback	Fairfax County, VA	12000 Government Center Parkway, Fairfax, VA	(703) 324-4384	james.stoneback@fairfaxcounty.gov
Lisa Thompson	Arlington County Emer. Comm.	1400 North Uhle Street, 5th Flr Arlington, VA 22201-9998	(703) 228-4009	lthompson@arlingtonva.us
Jacqueline Vaughan	Calvert County Pub. Safety Comm.	175 Main St, Prince Frederick, MD 20678	(410) 535-3491	vaughajk@co.cal.md.us
Randy Waesche	Carroll County, MD	225 N. Center Street, Rm. 023, Westminster, MD 21157-6900	(410) 386-2260	twaesche@ccg.carr.org
Theodore Wallace	Cecil County, MD	129 E Main St, Co Courthouse, Suite 6, Elkton, MD 21921	(410) 996-5350	twalllace@ccgov.org
David Warner	Comm. Of VA. VITA	110 S. 7th St 3rd Floor Richmond, VA 23219	(804) 371-5212	david.warner@vita.virginia.gov
David Wise	Howard County	3430 Court House Dr, Ellicott City, MD 21043	(410) 313-3283	dwise@co.ho.md.us
Bardonna Woods	Washington County, MD	33 West Washington Street Hagerstown, MD 21740	(240) 313-2906	BWoods@washco-md.net

Appendix B-2 Membership of the Technical Committee

Name	Agency	Phone	Email
Phil Lazarus	State Highway Administration	(443) 604-7710	plazarus@sha.state.md.us
Rick Bohn	Baltimore County	(410) 887-1878	rbohn@co.ba.md.us
Tony W. Rose	Charles County	(301) 609-3550	roset@charlescounty.org
Glenn O'Neil	Charles County	(240) 299-0848	geoneil581@hotmail.com
Gary McKelvey	Loudoun County	(703) 771-5123	gmckelve@loudoun.gov
Henry D. Black	MEMA	(410) 517-3637	hblack@mema.state.md.us
Rich Bumgarner	US Park Police	(202) 610-5295	Rich_bumgarner@contractor.nps.gov
Dale Johnson	City of Alexandria	(703) 930-1175	Dale.johnson@alexandriava.gov
David Wise	Howard County	(410) 313-3283	dwise@co.ho.md.us
Randy Cunningham	Harford County	(410) 638-4804	rjcunningham@co.ha.md.us
Gene Cummins	Montgomery County	(240) 773-8080	Gene.cummins@montgomerycountymd.gov
Ron Strobel	Anne Arundel County	(410) 222-8391	fdstrobe@aacounty.org
Bill DeHoff	Anne Arundel County	(410) 222-2020	bdehoff@aacounty.org
Frank Aghili	OCTO/NCR	(202) 442-4272	Frank.aghili@dc.gov
Jack Markey	Frederick County	(301) 694-1418	jmarkey@fredco-md.net
Teddy Kavaleri	District of Columbia	(202) 673-3139	Teddy.kavaleri@dc.gov
Joe Ross	NCR	(202) 448-9838	Joe.ross@dc.gov
Wayne McBride	Prince George's County	(240) 832-0715	wmcbride@co.pg.md.us
Charles Bryson	Prince George's County	(804) 301-1123	cbryson@rcc.com
Bill Dugan	Fauquier County	(540) 349-2281	Bill.dugan@fauquiercounty.gov
Tom Provenza	M-NCPPC PD	(240) 417-8253	Tom.provenza@pgparks.com
Bill Butler	NCR	(202) 442-4933	William.butler@dc.gov
Kyung Chul Heou	Joint Forces HQ-NCR	(202) 685-6142	Kyung.heou@jfhqncr.northcom.mil
Mark Navolio	NCR	(202) 442-4625	Mark.navolio@dc.gov

Appendix C - List of Independent Cities and Counties within Region 20

1. The District of Columbia

Commonwealth of Virginia

2. City of Alexandria, Virginia
3. Arlington County, Virginia
4. City of Fairfax, Virginia
5. Fairfax County, Virginia
6. City of Falls Church, Virginia
7. Fauquier County, Virginia
8. Loudoun County, Virginia
9. City of Manassas, Virginia
10. City of Manassas Park, Virginia
11. Prince William County, Virginia
12. Stafford County, Virginia

State of Maryland

13. Allegany County, Maryland
14. Anne Arundel County, Maryland
15. City of Baltimore, Maryland
16. Baltimore County, Maryland
17. Calvert County, Maryland
18. Caroline County, Maryland
19. Carroll County, Maryland
20. Cecil County, Maryland
21. Charles County, Maryland
22. Dorchester County, Maryland
23. Frederick County, Maryland
24. Garrett County, Maryland
25. Harford County, Maryland

26. Howard County, Maryland
27. Kent County, Maryland
28. Montgomery County, Maryland
29. Prince George's County, Maryland
30. Queen Anne's County, Maryland
31. Somerset County, Maryland
32. St. Mary's County, Maryland
33. Talbot County, Maryland
34. Washington County, Maryland
35. Wicomico County, Maryland
36. Worcester County, Maryland

State/Locality	Land Area Square Miles	2004 Population
District of Columbia	61	553,523
State of Maryland	9,774	5,558,058
Alexandria City	15	128,923
Arlington County	26	186,117
Fairfax City	6	22,062
Fairfax County	395	1,003,157
Falls Church City	2	10,781
Fauquier County	650	63,225
Loudoun County	520	239,156
Manassas City	10	37,166
Manassas Park City	2	11,519
Prince William County	338	336,586
Stafford County	270	114,781
Totals	12,069	8,265,054

Appendix D – Meeting Notices

Meeting attendance, agendas and other events where 700MHz information was disseminated.

PUBLIC NOTICE

Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

DA 01-859
April 9, 2001

WIRELESS TELECOM ACTION

REGION 20 (DISTRICT OF COLUMBIA, MARYLAND
AND NORTHTHERN VIRGINIA) 700 MHz
PUBLIC SAFETY PLANNING COMMITTEE
ANNOUNCES FIRST MEETING

The Region 20 700 MHz Convener announces that the initial meeting of the Region 20 700 MHz Public Safety Planning Committee will be held on June 22, 2001, at 10:00 a.m. Region 20 includes the geographic area of the State of Maryland, the District of Columbia, and the Northern Virginia counties of Arlington, Fairfax, Fauquier, Loudoun, Prince William and Stafford, and the city of Alexandria.

The purposes of the meeting are to:

1. Establish a Regional Plan Review Committee,
2. Elect a Chairperson,
3. Establish procedural rules,
4. Review plan elements,
5. Determine regional boundaries,
6. Review NCC progress, and
7. Form workgroups to develop the regional plan.

The meeting will be held at:

Maryland State Highway Complex
Office of Traffic and Safety Training Room
7491 Connelley Drive
Hanover, Maryland 21076

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz band should plan to attend. For further information, please contact:

(over)

Alan T. Kealey, Convener
Director, Wireless Communications
Maryland Department of Natural Resources
580 Taylor Avenue, E-3
Annapolis, Maryland 21401
(410) 260-8887 (voice)
(410) 260-8878 (fax)

email: Region20_700@dnr.state.md.us

Additional information about the 700 MHz National/Regional Planning and related matters can be found on the FCC Public Safety web site located at: http://www.fcc.gov/wtb/publicsafety/700MHz/

PUBLIC NOTICE

Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

DA 02-3447
December 13, 2002

WIRELESS TELECOMMUNICATIONS BUREAU

REGION 20 (DISTRICT OF COLUMBIA, MARYLAND, AND NORTHERN VIRGINIA) PUBLIC SAFETY PLANNING COMMITTEES ANNOUNCE
REGION 20 800 MHz (NPSPAC) REGIONAL PLANNING MEETING
AND
REGION 20 700 MHz REGIONAL PLANNING MEETING
(PR DOCKET NO. 91-300)

The Region 20 (District of Columbia, Maryland and Northern Virginia) 800 MHz Public Safety Planning Committee and the Region 20 (District of Columbia, Maryland and Northern Virginia) 700 MHz Public Safety Planning Committee announce that consecutive planning meetings will be held on Tuesday, January 28, 2003 (January 30, 2003 rain, snow and ice date) at the Potomac Community Public Library, Community Room, Prince William County, located at 2201 Opitz Boulevard, Woodbridge, Virginia.

The meeting of Region 20 800 MHz (NPSPAC) Regional Planning Committee will convene at 10:00 a.m. The agenda for this meeting includes:

- Update on Filing Windows 3 and 4,
- Technical Committee Report,
- Update on "RINS" channels reassignment plan,
- Update on committee appointments,
- New Business, and
- Adjourn 800 MHz meeting.

The meeting of the Region 20 700 MHz Public Safety Radio Review Committee follows adjournment of 800 MHz meeting. The agenda for this meeting includes:

- Plan and process background,
- Plan status,
- New Business, and
- Adjourn 700 MHz meeting.

Region 20 includes the geographic area of the State of Maryland, the District of Columbia, and the Northern Virginia counties of Arlington, Fairfax, Fauquier, Loudoun, Prince William and Stafford, as well as the independent cities of Alexandria, Falls Church, Fairfax, Manassas, and Manassas Park. Both of the Region 20 Public Safety Planning Committee meetings are open to the public. All eligible public safety providers in Region 20 may utilize these frequencies. It is essential that participants be representatives of all eligible public safety providers in order to ensure that your agency's future spectrum needs are considered in the allocation process. Administrators who are not oriented in the communications field should delegate someone with this knowledge to attend, participate and represent your agency's needs.

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz band and 800 MHz band within Region 20 should plan to attend, and are welcome to participate and volunteer for committee assignments.

For further information, please contact:

Alan Kealey, Chairperson
Region 20, 700 MHz and 800 MHz Public Safety Planning Committees
Maryland Department of Natural Resources
580 Taylor Avenue (E3)
Annapolis, MD 21401
(410) 260-887-8887 (voice)
(410) 260-8878 (fax)
Email: akealey@dnr.state.md.us

PUBLIC NOTICE

Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

DA 03-2852
September 8, 2003

WIRELESS TELECOMUNICATIONS BUREAU ACTION

REGION 20 (MARYLAND – METROPOLITAN AREA) PUBLIC SAFETY
PLANNING COMMITTEES ANNOUNCE
REGION 20 (700 MHz) REGIONAL PUBLIC SAFETY PLANNING MEETING
AND
REGION 20 NPSPAC (800 MHz) REGIONAL PUBLIC SAFETY PLANNING MEETING
(Gen. Docket 90-7)

The Region 20 (the District of Columbia, Maryland and Northern Virginia area[7]) Regional Planning Committees announce two Region 20 Public Safety planning meetings.

On Friday, October 31, 2003, the Region 20 700 MHz Regional Planning Committee meeting will convene at 10:00 a.m. in the Conference Room (Lower level), Office of Traffic & Maintenance, Maryland State Highway Administration, Hanover Complex at 7491 Connelley Drive, Hanover, Maryland.

The agenda for the 700 MHz for the Regional Planning Committee meeting includes:

1. Review and Approve Previous Meeting Report,
2. Review Plan & Process Background,
3. New Business/Comments,

[7] The Northern Virginia area consists of Arlington, Fairfax, Fauquier, Loudoun, Prince William and Stafford, Counties and the City of Alexandria.

4. 4.9 GHz Update, and
5. Schedule Next Meeting.

The Region 20 800 MHz Regional Planning Committee meeting will convene immediately following the adjournment of the Region 20 700 MHz Regional Planning Committee meeting.

The agenda for 800 MHz Regional Planning Committee meeting includes:

1. Update on Windows 3 & 4,
2. Technical Committee Report,
3. RINS Channels Reassignment Plan Update,
4. Committee Appointments Update,
5. New Business/Comments, and
6. Schedule Next Meeting

Each of the Region 20 includes the geographic area of the State of Maryland, the District of Columbia and Northern Virginia. Both of the Region 20 Public Safety Planning Committee meetings are open to the public. All eligible public safety providers in Region 20 whose sole purpose or principal purpose is to protect the safety of life, health, or property may utilize these frequencies. It is essential that not only public safety, but all government, Native American Tribal, and non-governmental organizations eligible under Section 90.523 of the Commission's Rules be represented in order to ensure that each agency's future spectrum needs are considered in the allocation process. Administrators who are not oriented in the communications field should delegate someone with this knowledge to attend, participate and represent your agency's needs.

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz and 800 MHz band and 4.9 GHz band within Region 20 should plan to attend. For further information, please contact:

Alan T. Kealy, Chairperson
Region 20, 700/800 MHz Regional Planning
Wireless Communications Division
Maryland Department of Natural Resources
580 Taylor Avenue (E3)
Annapolis, Maryland 21401
PH: (410) 260-8887
FX: (410) 260-8878
Email: akealey@dnr.state.md.us

REGION 20 - 700 MHz

Public Safety Radio Plan Review Committees

MEETING NOTICE

All Meetings are Open to the Public

Date: **Thursday, March 23, 2006**

Time: **Immediately following Region 20-821 MHz meeting**

Location: **Large Conference Room (Lower level)** ***Receptionist 410-582-5500***

Office of Traffic & Maintenance
Maryland State Highway Administration
Hanover Complex
7491 Connelley Drive
Hanover, Maryland

Agenda: **Region 20-700 MHz**

Business Meeting +/-

- 700 MHz – Status and update
- Plan update
- New Business
- Adjourn 700 MHz meeting

Information: G. Edward Ryan, II – Region 20-700 Chairman
C/o Wireless Communications Division
Maryland Department of Natural Resources
580 Taylor Avenue, E-4
Annapolis, MD 21401

Tel: 410-260-8734 Fax: 410-260-8404
Email: gryan@dnr.state.md.us

News media information 202 / 418-0500
Fax-On-Demand 202 / 418-2830
TTY 202 / 418-2555
Internet: http://www.fcc.gov
ftp.fcc.gov

PUBLIC NOTICE

Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

DA 06-1404
July 7, 2006

WIRELESS TELECOMUNICATIONS BUREAU ACTION

REGION 20 (DISTRICT OF COLUMBIA, MARYLAND AND NORTHERN VIRGINIA AREA) 700 MHz PUBLIC SAFETY PLANNING COMMITTEE ANNOUNCES NEXT PLANNING MEETING

The Region 20 (District of Columbia, Maryland and Northern Virginia area)[8] 700 MHz Regional Planning Committee announces that the next meeting will be held on Monday, August 14, 2006, beginning at 10:00 a.m., in the lower level conference room at the Office of Traffic and Highway Maintenance, Maryland State Highway Administration, Hanover Complex, 7491 Connelley Drive, Hanover, Maryland.

The agenda this meeting includes:

1. 700 MHz – Status and update
2. 700 MHz Region 20 Plan update, discussion and vote
3. Regional ID standardization plan for P25 systems – Tom Provenza
4. New Business
5. Adjourn

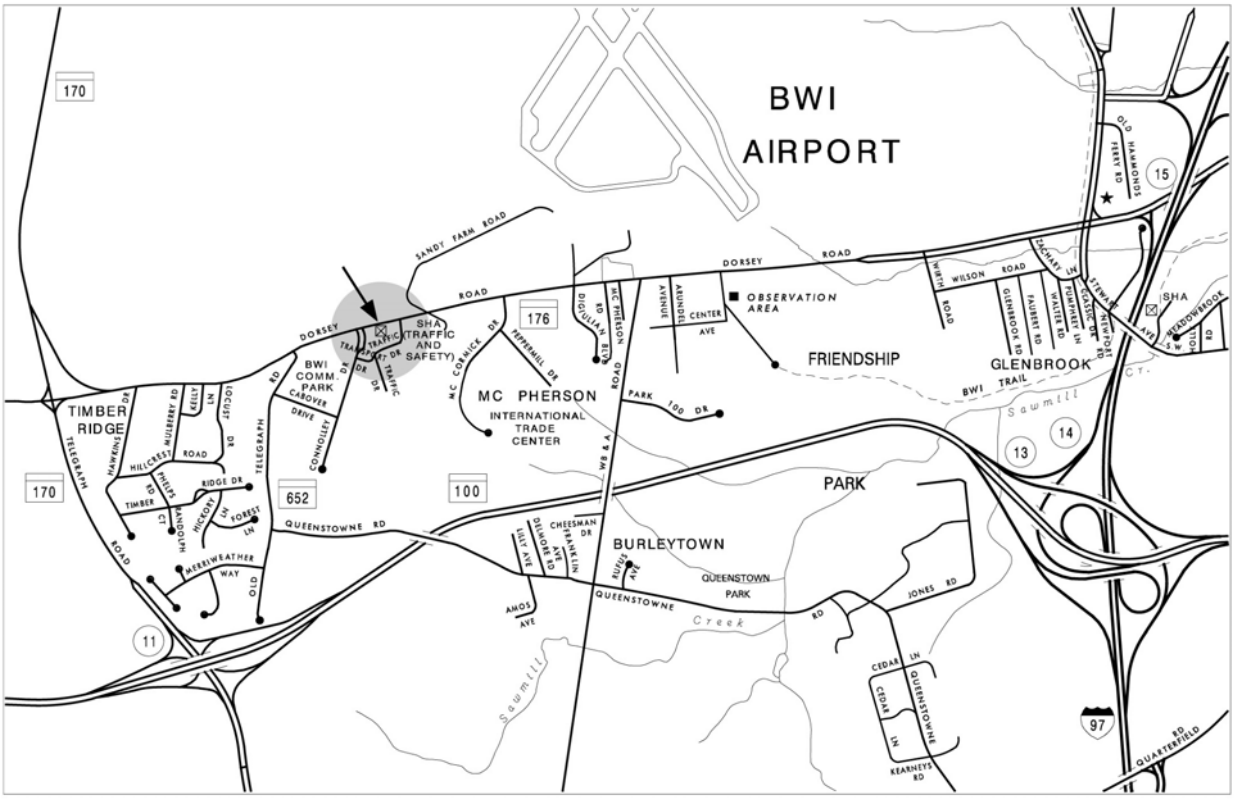
The Region 20 700 MHz Public Safety Planning Committee meeting is open to the public. All eligible public safety providers in Region 20 whose sole purpose or principal purpose is to protect the safety of life, health, or property may utilize these frequencies. It is essential that not only public safety, but all government, Native American Tribal, and non-governmental organizations

[8] The Region 20 area includes the District of Columbia, Maryland and Northern Virginia (Arlington, Fairfax, Fauquier, Loudoun, Prince William and Stafford Counties, and the cities of Alexandria, Fairfax, Falls Church, Manassas and Manassas Park).

eligible under Section 90.523 of the Commission's Rules be represented in order to ensure that each agency's future spectrum needs are considered in the allocation process.

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz band within Region 20 should plan to attend. For further information, please contact:

G. Edward Ryan, II
Region 20 700 MHz Chairman
Wireless Communications Division
Maryland Department of Natural Resources
580 Taylor Avenue, E-4
Annapolis, Maryland 21401
Telephone: (410) 260-8734
Fax: (410) 260-8404
Email: GRyan@dnr.state.md.us



Office of Maintenance, Office of Traffic & Safety, State Operations Center 7491 Connelley Drive, Hanover, MD 21076

Take 95 south to 295 south to 195 east (towards BWI). Take the first right exit 170 south. Follow 170 south and turn left onto176 - Dorsey Road. Continue on Dorsey Rd. approximately 1/2 mile and turn right onto Connelley Dr. The complex is on your left.

– FCC –

REGION 20 700 MHZ MEETING
AUGUST 14, 2006

ATTENDEES: Noel Armstrong (VA State Police), Henry D. Black (MD EMA), Charles Bryson (PG Co. RCC), Rich Bumgarner (US Park Police), Bill Butler (Nat'l Capital Region Pgrm.), Bryan Casey (Nat'l Capital Region Pgrm.), John Contestable (MDOT), Gene Cummins (Montgomery Co.), Randy Cunningham (Harford Co.), William Curry (DC EMA), Craig Fetzer (MD SHA), Linda Goodridge (Stafford Co., VA), Paul Hoppes (Comm. Of VA), Dale Johnson (City of Alexandria),Teddy Kavaleri, (D.C.), Phil Lazarus (MD SHA), Wayne McBride (PG Co.), Gary McKelvey (Loudoun Co., VA), Thomas Miller (MIEMSS), Glenn O'Neil (Charles Co.), Tom Provenza (M-NCPPC PD), Bette Rinehart (Motorola), Tony Rose (Charles Co. Emer. Serv.), Joe Ross (Nat'l Capital Region), Ed Ryan (MD DNR), Thomas Struzzieri (VA Police STARS), Lisa Thompson (Arlington Co. Emer. Comm.), David Wise (Howard Co.), Bruce Fryer (Motorola), Robert LeGrande (NCE-IP), Michael Martin (DPSCS), Al Sines (Sines Const. Svcs.), Keith Charin (Dataradio), Tom Struzzieri (VA State Police STARS), Ray Ellen (Tyco Elec.), Bill Cole (Cole Assocs.), David Eierman (Motorola), Maria-Elena Perez (DBM)

The meeting was called to order at 10:00 a.m.

Ed Ryan stated that the membership needed to go through the proposed By-Laws and the draft Plan that the Technical Committee had put together. Also need to look at amendments to the By-Laws.

Section 1.1, Section 1.1.1 – add "and independent cities within the region". Discussion ensued regarding the northern counties of Virginia (Alexandria). Amended.

Section 1.2 – Membership. A discussion ensued as to the title "chief administrative officer"; it was thought that it should be stated "Agency Head". Strike out from being appointed by the Chief Administrative Officer. Discussion also ensued as to the number of votes for each jurisdiction. A comparison to how the 800 MHz Committee votes was discussed and mention that it was not done by state agencies. It was done by public safety and environmental entities. Existing SIC model to include 7 from D.C. and Northern Virginia, 7 from Virginia State agencies and 7 from Maryland state agencies with a total of 35. A suggestion was made that each county in Maryland have a vote; Forestry, VDOT, Department of Information Technology, Virginia State Police as being counted for votes. A reading of the major elements of the Plan was done. Motion 24 representatives from Maryland; 7 Maryland state representatives to be assigned by SIEC. Virginia – 7 jurisdictions and 7 D.C. would have a vote. Motion to replace Section 1.2.1 was made. A statement that the voting membership, which consists of 1 representative each from the 23 counties of Maryland and 1 from Baltimore City, 7 from D.C., 7 from the Commonwealth of Virginia, 7 representatives from State of Maryland, and 1 each from the counties of Northern Virginia (7) and 1 from the City of Alexandria for a total of 53. Motion to accept the new 1.2.1.

Section 1.2.1.1. – Change the word “alternative” to “alternate”.

Section 1.2.1.2 – Voting member with conflict of interest. Motion accepted.

Section 1.2.1.3 – Identity of a substitute. Recognize substitute for the licensee. Motion accepted.

Section 1.2.1.4 – Voting a suspension. Motion accepted.

Section 1.2.2 – Non-Voting member. Discussion ensued about the Chair being able to manage the meeting time. Motion accepted.

Section 1.2.3 -- Motion accepted.

Section 2.1 – Joining and continuing membership. This was regarding adding members at special or regional meetings. Motion accepted.

Section 2.2 – Tenure. Motion accepted.

Section 2.3 – Powers and Rights. Motion accepted.

Section 2.4 – Suspension of Voting Rights and Removal -- Motion accepted.

Section 2.4.1 – Membership Suspension. Also included in this discussion were Sections 2.4.1.1 and 2.4.1.2. Discussion ensued regarding wording notices of such meeting has been issued to all persons, “**including**” the person subject… Motion accepted as amended.

Section 2.4.2 Committee action – removing a member. Motion accepted.

Section 2.4.3 – Immediate removal of persons. Motion accepted.

Section 2.4 – Resignation. Motion accepted.

Section 2.6 – Meetings. CFR – various locations. Motion accepted.

Section 2.7 – Special meetings. Reference made to Section 2.4.1. Motion accepted.

Section 2.8, 2.8.1 and 2.8.2 – Call and Notice. Notice by mail or e-mail thirty (30) days prior to the meeting. Motion accepted.

Section 2.9 – Quorum. There was much discussion on the number of voting members needed to constitute a quorum. Proposals that a quorum be an officer plus 5 voting members was supported by 5 attendees; an officer plus 10 voting members was supported by 8 attendees; an officer plus 15 voting members was supported by 7 attendees. A quorum is a physical representation at the meeting of a voting member or their designee. After additional discussion a motion was made to vote on the following 3 definitions of a

quorum. That a quorum consist of an officer + 5 voting members was supported by 5 attendees; an officer + 10 voting members was supported by 16 attendees; an officer + 15 voting members was supported by 11 attendees. Motion was accepted that a quorum consist of an officer plus 10 voting members.

Section 2.10 – Action by Vote. Motion accepted. Amendment to reflect that the Chair, or designee, can vote to block a tie. In the case where the Chair has an application, the Chair's designee shall vote. Motion accepted.

Section 2.11 – Action by Writing -- Motion accepted.

Section 2.12 – Proxies. Discussion ensued as to the number of proxies; problem with people carrying in proxies or just one vote for each member who would show up at the meeting. A body has to be here to vote. A representation of 3 and also unlimited; a member's own vote and 3 proxies. No proxy was supported by 3 attendees; Max 3 proxies for voting member was supported by 9 attendees. Unlimited proxy was supported by 7 attendees. Amend Section 2.12 to read: Voting motion 30 days before the meeting. A proxy holder has to be a member only. Some language changed to state "Voting member". Facility notices to include teleconference capabilities. Voting member shall not have more than 3 proxies. Motion accepted as amended.

Section 2.13 – Frequency Application. Motion accepted.

Section 2.14 – Conflict of Interest. Motion accepted.

Section 3.1 – Officers. Motion accepted.

Section 3.2 – Election. Motion accepted.

Section 3.3 – Tenure. Motion accepted.

Section 3.4 – Chairperson and Vice Chairperson. Chairperson should be capitalized. Motion accepted.

Motion to vote on sections at a time.

Section 3.5 – Secretary. Motion accepted.

Section 3.7 – Suspension or Removal. Motion accepted.

Section 3.8 – Resignation. Move to accept with administrative corrections. Motion accepted.

Section 3.9 – Term Limits. In the absence of any qualified candidate, discussion ensued regarding if no qualified candidate accepts nominations, this Section may be waived. This would allow the Chair to continue. Motion made to accept as amended. Motion accepted.

Section 3.10 – Vacancies. Motion accepted.

Section 4.0 – Committees.

Section 4.1 – Chair. Motion accepted.

Section 4.2 – Nomination of Committee Chairperson. Motion accepted.

Section 4.3 – Geographical Diversity. Motion accepted.

Section 4.4 – Committee Support. Motion accepted.

Section 4.5 – Tenure of Committees.
Section 4.5.1.1 – Operations Committee.
Section 4.5.1.2 – Technical Committee.

Section 4.5.2 – Non-Continuing Committees. Suggested language: Responsible for providing the information and inclusion in public notices." Suggestion to delete the last sentence of 4.5.1.1. Discussions ensued regarding responsibilities. Leave wording that the full committee (more talking) for ensuring that the notices for any full "regional planning committee" – remove last sentence and move it to the end of 2.6. Motion accepted.

Section 4.5 – Entitlement Without Amendment. Motion accepted.

Amendments: Suggest the change in the Plan or By Laws is being suggested. Amendment is not considered enacted until final approval of the Commission. "Notification of an amendment to be voted upon" to be the language. Motion accepted.

Dissolution – In notifying the FCC entire two sentences. Motion accepted.

Motion to accept By Laws as amended: Motion accepted.

REGIONAL PLAN

Charlie gave a presentation of the differences between 800 MHz and 700 MHz of importance to the RPC. Reported on the operability technical standards. Also reported on major elements of the Plan; the strategy to maximize frequency use.

Future planning: Several members complained that they have not had enough time or were not notified to review the 700 MHz draft plan. Motion to vote on the Plan today. Discussion ensued as to how to make it fair and equitable for everyone when applying for voice and data channels. Voting on the Plan: Motion accepted. Three abstains.

Discussion regarding the waiver – lower channel. Amendment to Region 20 700 MHz Plan, Section 3.13

REPLACE:

The licensee may charge users reasonable rates for access that may be based upon costs for amortization of network acquisition, infrastructure installation costs, system operational costs, network upgrades/enhancements, and reasonable overhead for the licensee's administrative costs of operation. In such situations, each agency shall internally negotiate costs without mediation by the Regional Planning Committee except in extraordinary cases.

WITH:

NON-PROFIT PUBLIC SAFETY USE: The system will only be used for non-profit public safety purposes. No costs for shared use of the system that may be included in future agreements will be in excess of the costs required to maintain and effectively operate any system or operation. Each Party will provide representation to the Governing Board. The Governing Board will meet at least once annually in the month of January to review operational needs and identify associated costs for the next fiscal year using agreed upon formulas, growth plans, etc. for which the respective jurisdiction/agency will encumber.

Motion to adopt amendment: Motion accepted.

Window 1: for 3 years the Region will accept applications and then window will close. The Technical Committee will consider the applications, bring them to approval and then brings recommendation to the full committee. Discussions ensued regarding inter-region concurrence.

In Window 1 – go to the assignments, reasons to make the decision to not delay – No. Is there value for the delay of a few years? Process whatever has been submitted. If it is valid, go ahead and submit the application. Define what Window 1 is. Motion to change the period from 3 years in Window 1 to 120 days. Another suggestion was made to hold the applications for one year instead of three. Applications presented to the Technical Committee and approved shall be presented to the full body. Have annual meetings up until such a time then Appendix G shall expire and we are in Window 2. Motion accepted. Three abstentions.

Region 20 700 Committee Minutes 01-28-2003

1.) Call To Order by Mr. Alan Kealey, Chair, at 11:40 AM.

2.) Introductions. Mr. Kealey introduced the working group chairs.

3.) Minutes of the June 17, 2002 meeting were approved.

4.) Mr. Kealey noted that the Region 20 Committee has 3 years to submit a plan to the Federal Communications Commission. The National Communications Council (NCC) is assisting the Regions with the plan developments.

5.) Mr. Craig Fetzer, Operations Working Group Chair, reported that the Operations Working Group last met on January 8, 2003.

(a) The NCC guidelines and copies of other region draft plans were distributed at the January 8 meeting.
(b) Mr. Fetzer asked for volunteers to help prepare the Region 20 plan.
(c) Mr. Fetzer described the progress being done by the various workgroups, and noted that he is assembling these efforts for the plan.
(d) Mr. Fetzer opened for discussion the question of whether the Region should handle applications in a Window process or a First In - First Out process. There was considerable discussion on this and related topics. A consensus was not achieved.
  (i) The advantages and disadvantages of each process were discussed.
  (ii) It was noted that based upon the Region 5 experience, it appears that the FCC leans toward the Window process.
  (iii) Dr. Michael Trahos commented that the applicant should do the interregional coordination.
  (iv) Mr. Hank Black commented that the Region should first check the application for completeness. There should be a check-list.
  (v) Mr. Robert Bridenstine questioned how the other adjoining regions might feel about the applicant handling the interregional coordination.
  (vi) There were other questions regarding what-if scenarios:
(e) What if there is an inter-region problem?
(f) What if the other region is inactive.
  (i) Mr. Gary McKelvey suggested an initial first window procedure, then go to the first in first out process.
(g) Mr. Fetzer advised that a draft plan will be developed and submitted to the general committee for review and comment. Next the plan will go to interregional review and comment, and then ultimately to the FCC for their review and public comment.

(h) Mr. Fetzer asked that if anyone wants to help out on the workgroup to please contact him.

6.) Mr. Rich Bumgarner, Chair of the Technical Workgroup reported that a national channel database is being developed by the NCC, but it has not arrived yet. He also noted that he

has given input to the operations workgroup regarding technical issues.

7.) Dr. Michael Trahos commented:

(a) Encouraged the committee to be vocal and comment on relative issues before the FCC when the opportunity exists.
(b) Suggested that the name of the committee should reflect 764 MHz rather than 700 MHz.

8.) Mr. Kealey noted the Internet Web (Yahoo Group) address of the Region Committee and discussed the purpose of same.

9.) Mr. Kealey noted that Mr. Ron Wade is Chair of Region 42 [800], that Mr. Wade and his family are enduring health problems, and to remember them. Mr. Kealey acknowledged Mr. Wade's efforts on the Region 42 Committee and his contribution to the constructive working relationship enjoyed between Region 42 and Region 20.

10.) The meeting was adjourned at 12:45 PM.

Submitted by Sam Somers filling in as recording secretary.

Attachments:

- Attendance Sign-in Sheet

Region 20 764 Minutes 01-28-2003a.doc

Region 20 Meeting Minutes

Minutes of Region 20 700 MHz RPRC Initial Meeting

June 22, 2001

Location: Maryland State Highway Administration
Office of Traffic & Safety Training Room
7491 Connelley Drive
Hanover, Maryland 21076

The meeting was called to order by the Alan T. Kealey, Convener, for Region 20 - 700 MHz at 10:10 a.m.

Mr. Kealey welcomed everyone to the meeting and provided a background of his appointment by Sam Somers (Vice Chair of Region 20 821 MHz) as the Convener for the 700 MHz Committee. That as Convener, he is responsible for organizing and publicizing this first meeting. In his capacity as the Convener, he appointed Howard Redman as the temporary Recording Secretary for this meeting.

Mr. Kealey thanked Craig Fetzer of the Maryland Highway Administration for making the meeting room arrangements and supplying the refreshments. He reviewed the informational handouts that were available and requested everyone to sign the attendance roster, asked that pagers and cell telephones be turned off or made to vibrate. Mr. Kealey asked that when speaking, to please state your name and organization. He also welcomed Mr. Paul Hopeis [Hoppes] from Region 42 in Virginia for joining us.

The purpose of this meeting as stated by Mr. Kealey is to answer three questions; (1) Do we organize a Regional Plan Review Committee for 700 MHz, (2) What are the regional boundaries and (3) if a committee is formed our third and final purpose will be to elect officers.

Mr. Kealey asked the group if there is interest in forming a Regional Planning Committee. The group indicated an interest to do so.

Mr. Kealey explained that the FCC established the National Coordination Committee (NCC) to provide recommendations, develop technical standards and assist the formation of regional plans.

As a prelude to answering the question, “Do we change the regional boundriares?” Mr. Kealey introduced Mr. David Eierman (Senior Staff Engineer for Motorola) and Ms. Bette Rinehart (Administrator in Motorola’s Regulatory Affairs section) to provide background on 700 MHz planning. In their capacity as members of NCC, they presented a presentation about the process of the 700 MHz channels, issues to deal with and timelines.

Mr. Kealey stated that after the presentation, we will have a better understanding of the process, and then address item (2) regional boundaries and item (3) elect a chairperson and form standing subcommittees.

Mr. Kealey introduced Dave and Bette to give their presentation.

After the presentation, Mr. Kealey explained the current Region 20 – 821 MHz boundaries and what that means for 700 MHz and the Regional Committee. This included an explanation of the opt-out issue for jurisdictions. Only those eligibles in the geographical area concerned can vote on the opt-out issue. Discussion continued on the advantages and/or disadvantages of opting-out. Mr. Paul Hoppes of Region 42 stated that they have not met to discuss the opt-out issue. Mr. Ali Shahnami stated that Region 42 can only work within State borders and states could agree to join to create super-regions.

Mr. Kealey explained that if there is consensus to opt out, the decision must be filed with the FCC no later than July 2, 2001. He then read the definition of consensus and other related words to assist with the determination.

The eligibles for the three geographical areas represented were instructed to meet as individual groups in different parts of the room to discuss and determine the opt-out issue. The three areas represented are Maryland, Virginia and the District of Columbia. The group recessed at 11:15 am for 30 minutes.

At 11:45 am the group reconvened to offer their decision on the opt-out issue.

Ed Ryan from the State of Maryland stated the eligible's within Maryland chose not to opt-out and are supportive of the super-region concept.

The northern Virginia group also chose to not opt-out, are supportive of the super-region concept and suggested that West Virginia be included in the super-region.

Al Sines spokesman for the District of Columbia also did not opt-out and was supportive of the super-region concept.

Having heard from each area of eligible's, Mr. Kealey stated the boundaries from our perspective are unchanged and we will now wait to hear from Region 42.

The next order of business was to elect the representatives of the Region 20 – 700 MHz Committee.

Ed Ryan nominated Alan T. Kealey to chair the committee. Phil Cooper seconded the nomination. Chuck Dennis made a motion to close the nominations, which was seconded by Gary McKelvey. Mr. Kealey was elected Chairman.

Chuck Denis nominated Gary McKelvey as Vice Chair, Bill Dugan seconded the nomination. Nominations were closed and Gary McKelvey was elected Vice Chairman.

Don Sura made a motion to nominate Mike Bennett as Secretary/Treasure. Logan Bowers seconded the nomination. Nominations were closed and Mike Bennett was elected Secretary/Treasure.

Ed Ryan made a motion that the chairperson be allowed to appoint committees as needed. Chuck Dennis seconded the motion and it was approved.

The following appointments were made by Mr. Kealey:

Recording Secretary:	Darla Burgess
Operations Subcommittee:	Craig Fetzer
Technical Subcommittee:	Rich Bumgarner
Frequency Database Administrator:	Richard Bohn
Legal Oversight:	Ruth Fahrmeier

Mr. Kealey explained the committee composition. He said at this point we are just an outline or framework of the complete Region 20 700 MHz committee. He stressed that it is important that we represent all eligible's within our area and work closely with our neighboring regions. He then asked all the subcommittee chairs to stand. He thanked them for serving their community of all eligible's in Region 20. He instructed them to fill their committees and for members of the group interested, to seek them out.

Mr. Kealey repeated that this is a framework and the first charge is for the Operations Subcommittee to develop the entire committee's composition and governing conventions. That we are to ensure good representation of eligibles and to consider a proposal by Dave Warner the Region 42 Convener to include voting representatives from adjacent regions.

Mr. Kealey stated that all interested parties must have an opportunity to comment and reasonable consideration of all views. He stated that we have three years to develop the plan, he then read the required plan elements from a FCC document.

Mr. Kealey announced that the next meeting would be in approximately 30 to 45 days in the Northern Virginia area. Meetings will be in different parts of the Region. All meetings, including subcommittee meetings are open to the public and to help exchange information we will be using a list server, and than subcommittees may establish list servers as well.

Mr. Kealey asked if there was any new business, there was none.

Mr. Kealey thanked the group for coming and participating in this historic event. He said we have an opportunity to be directly involved in work that will benefit thousands of people for decades to come. He again thanked Dave and Bette for their presentation and Mr. Redman for acting as Recording Secretary.

There being no further business the meeting adjourned at approximately 12:20 p.m.

Respectively submitted:

Howard S. Redman

Recording Secretary

Minutes of Region 20 700 MHz RPRC Meeting - August 22, 2001

Location: Alexandria Police Department
Alexandria, Virginia

The meeting was called to order by Alan T. Kealey, Chairman, Region 20 700 MHz Committee, at 10:15 a.m. Mr. Kealey thanked everyone for coming and gave a brief overview of the initial meeting held on June 22 at the State Highway Administration. He introduced officers and chairpersons of the various committees and gave a description of each committee's purpose. It was stated that all records will be archived by Maryland State Police (MSP) Electronic Communications Section at Waterloo.

Appreciation was expressed to Mr. Rich Bumgarner for arranging the meeting room and provision of refreshments. He also arranged for a demonstration of the APU1000's interoperability capabilities.

The minutes of the first meeting were distributed and corrections were made to misspelled last names. Craig Fetzer made a motion to accept the minutes with corrections; it was seconded by Rick Bohn. A verbal vote was taken and the minutes with corrections were accepted.

An issue that arose from the time of the initial meeting was a proposal to the National Public Safety Telecommunications Council (NPSTC) from a company in upstate New York on a method to pre-sort the 700 MHz database. Based on Rich Bumgarner's recommendation, discussions he's had with Gary McKelvey and information obtained from APCO in Salt Lake City, Mr. Kealey endorsed that proposal with a letter sent to the National Institute of Justice.

Mr. Gary McKelvey distributed handouts obtained while at National APCO in Salt Lake City. The most important issue relative to time was that states requesting the 2.4 MHz allocated for state geographic purposes needs to be applied for not later than December 31st of this year or that spectrum will be returned for general use. The 2nd most important thing heard was that 700 MHz spectrum seems a long way off with the channels that need to be returned but, on several occasions, it was stated that we need to focus on and begin the planning process to get as far as we can NOW. Someone asked when the first allocation of frequencies might take place, D'wanna Terrey (FCC at the APCO Conference) gave the 3rd quarter of 2001 as the time frame. That doesn't necessarily mean nationally, but she did say she felt that in the 3rd quarter of 2001 someone in the nation would be requesting and beginning the process for the 700 MHz frequencies.

The FCC has the National Coordination Committee **(www.fcc.gov/wtb/publicsafety/ncc.html)** looking at Project MESA which is the use of high speed broadband data. Also the Technical Committee is looking at Class A receiver standards, based on the interference problems in 800 MHz. They are seeking ways to eliminate those types of problems in 700 MHz.

NPSTC is supporting the Regional Planning Committees with a one time $2,500 distribution per region. They have put together CAPRAD (Computer Assisted

Pre-coordination Resource And Database) on a computer at the University of Denver that will have all of the information on the web relative to the channels assigned by each region accessed by an authorized region individual. This will be a tremendous benefit in working with inter-regional groups.

NPSTC talked about major improvements and support but weren't specific. They did, however, mention that there is a plan and guideline documents near completion and will be available on the website.

The FCC enforcement arm, which apparently has not been very strong in the past, is really changing. They are pleading for users having interference problems to call them and ask for their support. The previous chairman and the new chairman have put tremendous resources into enforcement. If you have a history of interference with little or no support in the past, call the enforcement organization.

FCC is looking to minimize interference problems with 700 MHz with guard bands and other standards that will be set. The FCC, through Mary Schultz, in the next six months will send out 286,000 letters to users of frequencies below 512 MHz. They will ask: Do you have the systems are constructed? If you don't have the systems constructed, check that box and, of course, their expectation is that you will return the frequencies. The third box is, "No, I don't have it constructed with an explanation." The turn around time on the letters is 30-60 days. Start gathering your information so you can provide a reasonably quick response.

Mr. Rich Bumgarner spoke next regarding the Technical Committee. Rich commented that he is intentionally waiting until he knows if Region 42 is going to merge with Region 20. There will definitely be representation from both Regions on the committee regardless of the outcome. Rich talked with Dave Warner while at APCO about how Region 42 addressed a Technical Committee. It was Rich's understanding that the people in a Region would come together when there was an application from that particular area.

Rich talked about a couple of technical points: Motorola is actually running a 700 MHz wideband data 150 KHz experimental license in Florida. There was a presentation during the APCO National Conference. It is Rich's understanding that on the wideband data, the protocol, the actual format of how that data will be sent will probably be decided in October. Motorola has a protocol they are running in Florida. This information is available on the website.

Mr. Bumgarner had copies of the proposal from the New York based non-profit organization to NPSTC for population of the national database ahead of time. Many people who have been involved with this stuff for a long time think this is worthy of consideration as a starting point to make the "maximum packing" of frequencies for the entire United States.

They are proposing to do this as if all of the TV stations are gone. Their approach is to give a minimum of 100 KHz to every place in the country. Terrain, population density, law enforcement people, etc. are taken into account. This is just the starting point. It, in no way, prevents reorganization by the Regional Committee within the Region. It should give the maximum number of frequencies to play with but how they want to be arranged within the Region is up to the

Committee and does not hamper the Committee's work in any way. As stated earlier, Rich recommended to Alan Kealey that we endorse this proposal and Alan wrote the letter or endorsement.

Craig Fetzer is also waiting for resolution of the proposed merge of Regions 20 and 42 in order to provide fair representation. The Committee is tasked with developing the overall Committee Regional Plan. Mr. Fetzer stated he is looking forward to having volunteers from all of the Region working on the Operations Committee.

Lt. Michael Bennett requested that everyone fill out a registration form so we can setup a database containing e-mail addresses, telephone and fax numbers, etc. Once all of the information is in the database, we will make sure everyone gets a copy.

Rick Bohn, Frequency Custodian, will be working closely with CAPRAD and once the merger issue is settled, he'll be looking for some help.

Ruth Fahrmeier, Legal Advisor, will check to see if Regions 42 and 20 merge will the NPSTC distribution be $5,000. Ruth's function will be to make sure we don't stray from the "straight and narrow."

Mr. Kealey apologized to the representatives from Virginia for failing to introduce them at the beginning of the meeting but immediately rectified that oversight.

Dave Warner from the Commonwealth of Virginia praised the committee for it's leadership, organization and being a role model for the rest of the country. Dave stated that we all have common goals and objectives but the way we achieve them may differ. He stated that the Commonwealth has some sovereignty issues and want to maintain their presence. His big questions was," How do we go about this regional, Super Region, or federation?" Dave is looking for input and has had other ideas and input voiced to him such as taking people from each of the committees, forming the Super Region and working out the spectrum and making all our borders disappear. The positive aspect is that each Region would have representation and the ultimate committees would have veto power if they felt something was not properly addressed at the Super Region level. The issue could still be discussed within each of the Regions, i.e. 20, 42, 36, etc., etc.

The negative side is that we'd still have to work out how representation would be handled. Dave is open for suggestions, discussion, questions, and comments.

Each Region would receive the $2,500 distribution from NPSTC. Region 42 has already applied for their allotment.

The common goal is allocation of spectrum. Mr. Kealey believes we would have better utilization of the spectrum as far as making the buffers go away but, at this point it would only affect Maryland and Virginia but believes as this rolls out operationally, the other regions will also join along with that. As far as one organization, is there a benefit to being that large, encompassing two states and the district? There is a benefit for each of the regions. The border would go away but we're all part of the process. Dave and Alan both believe that no matter what happens with the proposed Region merger, there should be representation from the

adjacent regions. All those present seemingly agree that it would be a cooperative effort with participation by both Regions. This is not something to rush into and will require much thought and discussion as to technical and administrative matters.

The FCC and other organizations want to see people joining together and working cooperatively. We have a great opportunity to make history by combining two strong organizations. This will certainly give us a stronger voice with organizations like the FCC and we would be an example for the rest of the country.

Region 42 can elect to join Region 20 creating a Region 20 comprised of the combined areas. Do we look at the standing committees, or do we need additional committees, or do we, at this time look at co-chairs giving Region 42 equitable representation.

Region 20 is small and the travel is easy. Maybe if we opt together, we can look at restructuring to have subregions and multiple vice chair positions so both sides feel their interests are preserved and represented. Due to the size of the geography of the combined regions, there may need to subcommittees for certain geographic areas.

The big questions is how administrative issues will be handled to meet the needs of all parties concerned. Whether the regions combine or not, they will continue to work together and have mutual cooperation.

Mr. Kealey stated he believes there could be more than one vice-chair of the overall committee. Someone from the Region 42 membership. The standing committees are: Recording Secretary, Operations Subcommittee, Technical Subcommittee, Frequency Database Administrator and Legal Oversight. There may be others, there may be less as we learn more and move to the future. It would not be unreasonable to have a co-chair from Region 42 for each one of these. Exploration of a new way of doing business whereby we can learn from each other and that the new region incorporate the things that work well in Region 42, particularly some of the local representation. Would the vice-chair have a responsibility to provide oversight to some of these standing committees and a geographical part of that new region? By taking the best from both sides would give us an overall better region.

Region 20 is a very active region which requires more frequent meetings than Region 42. Work groups and the standing committees would probably meet more frequently, particularly with conference calls, list servers and the like, today's communication technology can limit the need to frequently drive long distances. Everyone may not attend each meeting but they certainly have an opportunity to be informed and have their comments on record.

BOTTOM LINE: Is there a good reason to come together and form one organization?

The technical issues, even if we aren't in one region, will be overcome and we will still work very closely together with each other and our neighbors.

After much discussion, a motion was made by Lieutenant Michael Bennett, MSP:

If Region 42 opts into Region 20, each standing committee will be co-chaired by a Region 42 representative.

No standing committee will be populated until Region 42 makes their OPT-OUT decision. There will be a Region 42 representative co-Vice Chair of the overall committee.

The motion was seconded by Rich Bumgarner after which a verbal vote was taken. There was no opposition voiced. The motion was carried.

The District of Columbia has made application for the State channels.

There will be a one day PSWN Symposium at the Naval Academy Officers' Club jointly sponsored by PSWN and Maryland State Police. This is an opportunity for us to reconnect with some of our State officials about what the State would like to see as far as a new communications system. Interoperability issues will be discussed. The symposium is free and lunch will be provided. There's room for approximately 150 people.

Dave Warner will inform the Region 42 members of the discussion at today's meeting and make a conference call to Alan for further discussion.

Our intention was to have our next Region 20 meeting in Western Maryland. We'll wait until after October 2nd to schedule the time and place of the next meeting.

APPROVED AT THE JUNE 17, 2002 REGION 20 700 MHz MEETING 5

The meeting adjourned at 12:15 p.m.

Respectfully submitted:

Darla O. Burgess

Recording Secretary

APPROVED AT THE JUNE 17, 2002 REGION 20 700 MHz MEETING

Minutes from RPRC – Region 20 700 MHz on 1-22-2004
January 12, 2005

Bob Gurss, speaking on the Intelligence Bill, 911 Commission Report, and the Senate Version of the CDT and TV stations stated that in-house is not ready; a lot of momentum only. Regarding right of the communications act, some kind of funding mechanism to press to get a converter box for their TVs. This was done in Germany. Pretty good shot to get something through this year; in the near term we will know that is the spectrum that is available.

Current legislation: Stations have to give up their analog. Cable systems have to carry the analog stations. Of its 10 TV channels, 6 were auctioned off and 30 MHz allocated to go to auction. Reallocating some or all of that for broadband. Lucent is promoting doing this. Commercial wireless people are losing interest. Legislation passed last year - two studies to be done: (1) DHS in consultation with the FCC and (2) the other is the FCC in consultation with DHS.

Sam asked if the licensees are authorized to operate within the block area of TV stations. If you are outside of the interference zone – yes. Some potential there if you can figure out how to do it. One licensee got approval to be in the middle of a TV zone. Extension of the wide-band – the commission issued an order on that recently. They pushed this way out.

Craig Fetzer, who is responsible for drafting this plan, left and did not provide the Committee with an update. Two years ago a meeting was held, but there has been no meeting since then. Ed requested that Gary spearhead the efforts to draft a plan.

Ed reported that Dave Warner approached Gary and asked how to utilize the state's allocation along the state's border. Ed, Gary and Rick had a number of different discussions between Maryland, Virginia and DC. Rick Bohn came up with cellular type allocation. This is mileage based and a super cell cluster. Size based upon Loudoun's 40 and 5 DBU contours. Incorporates some plans using New York's channel allocation. Overlays use geometric shapes to lay out how the frequencies are distributed. Similar to Missouri's geometric pattern, but with an emerging data overlay – cell splitting. Need to start this plan for Maryland.

Norm Coltri said that Region 28, eastern PA, DE and southern NJ. Had a preliminary 700 meeting and elected a Chair and a Vice Chair. Dick Reynolds is the Chair for 700. Gary to push the operations committee to get this plan taken care of. Rick said that what is needed is administrative type people to help put this together.

Is there a 4.9 GHz plan in the offing? Yes. We will schedule another meeting in the near future and hope to have more information.

Minutes of the Planning (Technical) Committee

Region 20 700 MHz Technical Committee Meeting
April 27, 2006

Attendees: Phil Lazarus (SHA), Rick Bohn (Baltimore County), Tony Rose (Charles County) Glenn O'Neil (Charles County), Gary McKelvey (Loudoun County), Henry Black (MEMA), Rich Baumgarner (APCO), Dale Johnson (Alexandria), David Wise (Howard County), Randy Cunningham (Harford), Gene Cummins (Montgomery), Ron Strobel (Anne Arundel County), Bill DeHoff (Anne Arundel County) Frank Aghili (OCTO/NCR), Jack Markey (Frederick County), Teddy Kavaleri (DC), Joe Ross (NCR), Wayne McBride (Prince George's County), and Charles Bryson (RCC Staff for Prince George's County).

1. The meeting began at 12:00 noon with a call to order by Technical Committee Chairman McBride.

2. There was discussion relative to the appointment and charge of committees. The discussion led to a brief phone conference with Craig Fetzer (relayed by Gary McKelvey) who suggested that the Technical Committee is charged with addressing the technical issues associated with development of the 700 MHz band. Once the technical issues have been addressed by the Technical Committee, the work outputs should be sent to the Operations Committee (chaired by Mr. Fetzer). All persons in attendance were comfortable with the appointment of the Technical Committee chair and the charge of the group as relayed from Mr. Fetzer.

   There was also some discussion about the meeting and whether it was open to the public. For clarification where this issue is addressed, the FCC's rules relative to the charge of the Region are found in 47 CFR Ch. I (10–1–05 Edition) § 90.527

   47 CFR §90.527 Regional plan requirements

   Each regional planning committee must submit a regional plan for approval by the Commission.

   (a) Common elements. Regional plans must incorporate the following common elements:

   (1) Identification of the document as the regional plan for the defined region with the names, business addresses, business telephone numbers, and organizational affiliations of the chairpersons and all members of the planning committee.

(2) A summary of the major elements of the plan and an explanation of how all eligible entities within the region were given an opportunity to participate in the planning process and to have their positions heard and considered fairly.

(3) A general description of how the spectrum would be allotted among the various eligible users within the region with an explanation of how the requirements of all eligible entities within the region were considered and, to the degree possible, met.

(4) An explanation as to how needs were assigned priorities in areas where not all eligible entities could receive licenses.

(5) An explanation of how the plan had been coordinated with adjacent regions.

(6) A detailed description of how the plan put the spectrum to the best possible use by requiring system design with minimum coverage areas, by assigning frequencies so that maximum frequency reuse and offset channel use may be made, by using trunking, and by requiring small entities with minimal requirements to join together in using a single system where possible.

(7) A detailed description of the future planning process, including, but not limited to, amendment process, meeting announcements, data base maintenance, and dispute resolution.

(8) A certification by the regional planning chairperson that all planning committee meetings, including subcommittee or executive committee meetings were open to the public.

3. With respect to the By-Laws and Rules of the 700 MHz Committee, Prince George's County was asked to research the rules adopted by other Regions and report back to the Operations Committee.

4. The next issue addressed by the Technical Committee related to the proposed RWBN network advocated by the National Capital Region (NCR). Three issues seemed to permeate the session.

   A. With respect to the frequency plan, the NCR believes that the preliminary assignments included in the draft Region 20 data allocation model would permit implementation of the RWBN without creating interference to the non-NCR members of Region 20. The group had questions related to the model as developed by the NCR.

B. Some members of the Region's membership advocate an expansion of the RWBN network that would provide broadband access throughout the Region.

C. Should the Region support the proposed RWBN waiver to the FCC's current rules? This issue is in response to 700 MHz Committee Chairman Ed Ryan's charge to the Committee to formulate a recommendation relative to support for the waiver.

Joe Ross and Frank Aghili spoke to the issues on behalf of the NCR. Mr. Ross provided the Region's perspective relative to the potential deployment of three (3) broadband channels that would not cause interference to non-NCR Region 20 members operating on an unused frequency or outside of the guard band range of ten (10) to twenty (20) miles.

Following considerable discussion, Gary McKelvey moved that the Region adopt the assignment of data channels as included in the draft Region 20 Plan. The motion was seconded by Teddy Kavaleri. After a call of the question, the motion was not carried.

Additional discussion resulted after the motion failed and due to time constraints, the Chair ended discussion and stated that the issue would be carried over to the next meeting. At that meeting, the NCR will be asked to speak to the issues of potential interference to members outside of the NCR as well as strategies to expand the concept to cover the entire Region.

5. The next issue raised by the Chair related to the voice portions of the 700 MHz voice assignments. The Chair noted that another Region had also struggled with the data portion of the Plan and contemplated the submission of only a plan for voice pending the resolution of certain issues by the Commission (please see http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-34A1.doc for additional information).

6. The first issue addressed relative to the 700 MHz plan related to the 25 KHz CAPRAD assignments (grouping of four [4] 6.25 KHz channels). The question of using a 25 KHz allocation as a default was raised as P25 systems will only require a 12.5 KHz channel allocation. Both Motorola's ASTRO25® and M/A-COM's P25^{IP}® technologies use 12.5 KHz channels. However, M/A-COM's OpenSky® technology, which can operate in 700 MHz, does require a 25 KHz channel.

As an issue of concern, if all allocations are made using 25 KHz allocations (four 6.25 KHz channels), the users of ASTRO25® and M/A-COM's P25^{IP}® systems will need to exchange channels with other

jurisdictions. Prince George's County has already experienced this problem and had preliminary discussions with Fairfax County on the exchange of channels. This trading and coordination prohibits the default establishment of "orphan" or unused channels.

The options for channel assignments were discussed by the membership. At the conclusion of the discussion, Prince George's County was asked to review the technical issues and report back to the Committee at the next meeting.

7. Alexandria reported that it would release all of its 700 MHz channel allocations to Prince George's County. Prince George's acknowledged and accepted the offer of Alexandria.

8. There was discussion that the 700 and 800 MHz Technical Committees should be combined as many of the attendees support both committees and that the duplication of effort was unnecessary. Gene Cummins moved that the Technical Committees be combined into one group. The motion was seconded by Gary McKelvey. The motion was carried.

9. Following the passage of the motion, the Chair expressed a concern that by combining the groups, the important issues related to 700 MHz could be delayed. Following brief discussion, Mr. Cummins amended the original motion to defer the implementation of the combined committees until 9-1-2006. The amendment was seconded by Mr. McKelvey and the amended question was again carried.

10. There was an additional suggestion that the 700 MHz Technical Committee meet following meetings of the Region 20 Rebanding Committee. The Chair agreed; however, until there can be coordination with the Chair of the Rebanding Committee, a coordinated meeting schedule cannot be established.

11. Members of the Technical Committee were reminded that there is a Region 20 technical section on the web page. Members were encouraged to email Rick Bohn to enroll themselves and any consultants supporting the client member of the Region. Mr. Bohn's email is rbohn@co.ba.md.us

12. No firm date for the next meeting was established until the Chair can coordinate with other chairpersons. The agenda for the next meeting includes:

    A. Follow-up presentation by the NCR regarding the RWBN
    B. Findings of Prince George's County regarding the question of By-Laws and 12.5/25 KHz channel assignments

These minutes were approved at the May 25, 2006 meeting of the Committee

Region 20 700 MHz Planning (Technical) Committee Meeting
May 25, 2006

Attendees: Gary McKelvey (Loudoun County), Dale Johnson (Alexandria), Joe Ross (NCR), Wayne McBride (Prince George's County), Bill Dugan (Fauquier County), Ed Ryan (Maryland DNR), Mark Navolio (NCR) and Charles Bryson (RCC Staff for Prince George's County).

1. The meeting began at 12:45PM with a call to order by Technical Committee Chairman McBride.

2. The Chair asked if there were any corrections to the meeting minutes of April 27, 2006. No corrections were offered verbally in the meeting or through email and the minutes were accepted.

3. As the first order of business, the Chair invited Mr. Joe Ross, representing the National Capital Region (NCR), to provide a presentation on the RWBN. The presentation and subsequent discussion of the group is generally outlined below.

   A. Pre-FCC rule making issues – this is what has been presented by the NCR in the past to the NCR as well as Region 20.

   B. Reported that NCR represents 52.5% of the population of jurisdictions in Region 20. One broadband channel uses 53% of the available 700 MHz channel allocations for data.

   C. Expansion of broadband throughout Region 20 – NCR suggests that a plan could be provided; however, there would be some overlap.

   D. A question was raised relative to the use of data frequencies for state use. One hypothesis discussed was that data channels are allocated geographically and not to specific governmental units. Accordingly, any eligible licensee within the geographic area of assignment, such as a city within the assignment or state government, could apply for use of the 150 KHz identified for data in the 700 MHz band. However, once awarded a license for a geographic area, the licensee would be required to make the system available to any eligible licensee who would be otherwise authorized to apply for the channels. This would require the licensee to permit use of the system by any other eligible licensee much like a "common carrier" would provide usage to a large base of users. There seemed to be general concurrence within the attendees that an eligible licensee in an assignment area could apply for the use of the channels.

E. Another strategy discussed was to draft the data portion of the plan in such a manner as to not restrict each geographic region to three (3) consecutive 50 KHz channels in 700 MHz. This would permit an eligible licensee to make application to Region 20 for a wider range of channels needed to support various technologies including a broadband solution. When a licensee is prepared to make application for data channels, the licensee would come to Region 20 with the request for approval of the required number of data channels. Region 20 would be responsible for filing a waiver of the current rules with the FCC to permit a licensee to use more than the three (3) consecutive 50 KHz data channels.

F. Prince George's County (RCC) was asked to contact informally the adjacent regions to determine the impacts of a broadband network developed for use throughout the State of Maryland and the Virginia counties of Region 20.

4. The Chair stated that there will be one addition meeting in the near future to discuss the data channel allocation issues. At the conclusion of that meeting, the Technical Committee will finalize a recommendation to be reported to the Region's membership. That meeting will be held at the Prince George's County Central Communications Training Room located at 7911 Anchor Street in Landover, MD. This is about 1.5 miles west of I-495 (Exit 15B) and Maryland 214 (Central Avenue). The meeting will begin at 10:00AM on June 15, 2006. For directions or additional information, please call Wayne McBride at (240) 832-0715.

5. The resolution emailed to the Technical Committee related to channel assignments was discussed. One point of unanimity was that the allocation method, either 12.5 KHz or 25 KHz, presents the potential of problems relative to orphan channels, coordination, etc. It was suggested that initially, the Region will use the CAPRAD allocation; however, carefully evaluate its efficiency and reserve the right to follow alternative approaches to frequency allocation in the future. The resolution was not adopted and the CAPRAD table of assignments will be used initially in the assignment of channels.

6. As a point of clarification, the Technical Committee concurred with the concept that all frequency allocations are geographic, not political. The allocations permit any eligible licensee in a political jurisdiction to make application for a frequency.

7. The Committee also adopted the concept that the Plan will contain specific windows of time in which an eligible licensee can make application for frequencies. Once the window has closed, the Region

may reallocate unused channels to the general pool of available frequencies or implement a “first come – first served” approach.

8. The agenda for the next meeting includes:

   A. Review and approval of the minutes
   B. Review of proposed By Laws to be included in the Plan
   C. Discussion of the voice channel assignments
   D. Discussion of data channel assignments
   E. Other issues to be incorporated into the Plan

These minutes were approved at the June 15, 2006 Meeting.

Region 20 700 MHz Planning (Technical) Committee Meeting
June 15, 2006

Attendees: Gary McKelvey-by phone (Loudoun County), Dale Johnson (Alexandria), Bill Butler (NCR), Wayne McBride (Prince George's County), Mark Navolio (NCR), Phil Lazarus (SHA), Tony Rose (Charles County), Randy Cunningham – by phone (Harford County), Teddy Kavaleri (DC), Tom Provenza (M-NCPPC-PD), Linda Goodridge – by phone (Stafford), Kyung Chul Heou (Joint Forces HQ), Rick Bohn – by phone (Baltimore County) and Charles Bryson (RCC Staff for Prince George's County).

1. The meeting began at 10:15AM by Technical Committee Chairman McBride.

2. The Chair asked if there were any corrections to the meeting minutes of May 25, 2006. No corrections were offered and the minutes were accepted.

3. The first order of business was a review of the proposed By-Laws. Following a discussion of the draft By-Laws, Dale Johnson moved for acceptance of the document with Gary McKelvey providing a second. The By-Laws were adopted without dissent.

4. The second order of business was a discussion of the Plan's voice radio channel assignments. The discussion was led by the Chair and the Committee concurred that the assignment of either 12.5 KHz or 25 KHz channels should be performed in a "vendor-neutral" manner. As such, the Technical Committee supports the assignment of either 12.5 KHz or 25 KHz channel assignments as required by the applicant. CAPRAD will be used as the basis for assignments; however, when an applicant for channels requires additional spectrum, the Technical Committee will assess the request and when appropriate, identify additional channel assignments. A flowchart of the channel assignment process is depicted as Attachment A. A summary of the Technical Committee's comments will also be drafted as a portion of the plan and reviewed for final approval at the next Technical Committee meeting.

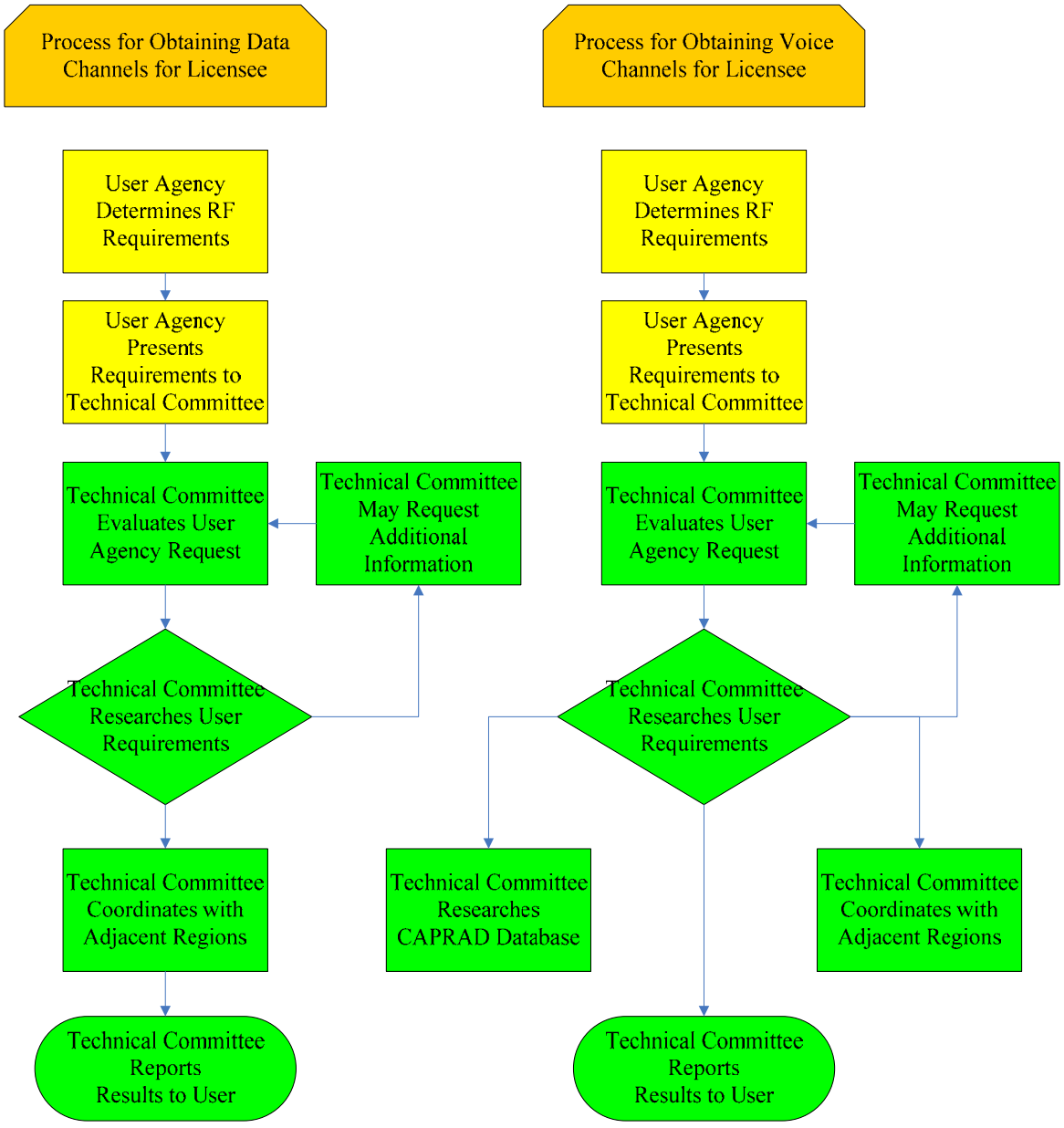
5. As a third order of business, the Technical Committee discussed the data channel assignments as a continuation from the May 25 meeting. The Committee made minor revisions to the draft verbiage for Section 3.5 of the Plan. The revised document, as amended, will be provided to members.

6. The Technical Committee will attempt to expedite its review of the draft Plan in total. It is hoped that the draft Plan can be approved by the Technical Committee at our next meeting on June 27 at 1:00PM. The next Technical Committee meeting will be held at the Prince George's

County Central Communications Facility (CCF) at 7911 Anchor Street in Landover. Following review of the June 25 minutes, the sole agenda item will be a final discussion of the draft 700 MHz.

7. The Committee requested that the Chair contact the Region 20 Chair and request a general 700 MHz Region 20 meeting to discuss the draft plan. The Technical Committee Chair will contact the Region 20 Chair and request that the meeting be held on July 26.

Attachment A



Recipients are asked to review these minutes and report and errors at the next meeting of the Region 700 Technical Committee.

Region 20 700 MHz Technical Committee Meeting
June 27, 2006

Attendees: Gary McKelvey (Loudon County), Bill Butler (NCR), Wayne McBride (Prince George's County), Phil Lazarus (SHA – by phone), Tony Rose (Charles County), Glenn O'Neill (Charles County), Randy Cunningham – by phone (Harford County), Teddy Kavaleri (DC), Tom Provenza (M-NCPPC-PD), Linda Goodridge – by phone (Stafford), Sergeant Chadwick (Joint Forces HQ by phone), Rich Bumgarner (US Park Police), Frank Aghili (NCR), Hank Black (MEMA-by phone), and Charles Bryson (RCC Staff for Prince George's County).

1. The meeting was called to order at 1:00PM by Technical Committee Chairman McBride.

2. The minutes from the previous meeting were reviewed and accepted.

3. The main order of business was a review of the draft 700 MHz Plan. The comments of the Technical Committee are noted in the following bullets.

    - There was considerable discussion relative to Section 3.3 of the draft which "requires" an applicant to return, when appropriate, spectrum vacated by the 700 MHz frequencies assigned by the Region. The general consensus of the Committee was that the language sets a high moral tone and is appropriate; however, the means to enforce the provision do not exist. The total authority of the Region after the Commission has issued a license is limited to petitioning the FCC to revoke the license, a step which was unappealing to the Committee's members. The direction from the Committee was to amend this section by requiring a letter from a person of authority within the applicant's organization pledging to return any unused frequencies one (1) year after the applicant has accepted the new 700 MHz system and implemented its use. The letter must state that the person signing has the authority to require such a return through a fiduciary power over the applicant. At a minimum, this creates documentation of the applicant's pledge to return the channels that can be considered by the FCC as appropriate.

    - There was discussion relative to Section 3.5 of the draft which includes language related to channel loading. One of the confusing issues for persons is that with 700 MHz channel loading, the formula must be different from the one used with 800 MHz. Depending upon the technology employed by an applicant, a single channel/frequency, as was used with 800 MHz, is different from the two or four channels needed in 700 MHz to create a 12.5 or 25 KHz frequency. Following significant

discussion, the direction of the Committee was to amend the section of the draft defining channel loading by stating that a subscriber's terminal device equals a radio for channel loading purposes. As an example, a piece of fire apparatus with a mobile and four (4) portables would representative five radios. A police officer with a mobile and portable radio would equal two radios. This 1:1 assignment, which different from the strategy used with 800 MHz, was adopted by the Committee.

- With respect to the number of channels assigned to an applicant, the Committee concurs with the Plan and supports CAPRAD as the starting point for the basis of assignments. However, when the applicant's requirements exceed the channels as provided by CAPRAD, the Technical Committee should consider engineering reports, Grade of Service studies, etc. and based upon the relevant technical documentation brought forward by the applicant and when appropriate, assign additional channels within the provisions of the Plan or 47 CFR §90 Subpart R. This would include the important provisions adopted by the NPSTC National Coordinating Committee for the 700 MHz Pre-assignment Rules (NCC) incorporated in Section 6.3 of the draft Plan.

- In Section 3.13 of the draft relating to wideband/broadband data, representatives from the NCR reported that they had asked their counsel for reaction to this provision of the Plan. Reportedly, the NCR's counsel concurred with the language; however, predicted that the FCC would reject this provision if the NCR's petition or a similar petition permitting sufficient channels to support wireless broadband was not approved pursuant to their review in the 8th NPRM. The NCR did not request any changes and brought that matter to the Committees attention merely as an item of information.

- Another portion of Section 3.13 was identified by a member who asked that it be brought back to the Committee for further review. In the verbiage approved at the June 15 meeting, the Committee approved the concept of requiring a licensee of a data network to provide access to any eligible licensee within the mutual geographical area of assignment. The basis of this requirement is found in 47 CFR §90.527 which ***requires*** (emphasis added) small entities to share in a system. The logic of the Committee's action is that if the FCC requires small entities to share in a system then the licensee must permit them to have access so that the sharing may be realized. The member was satisfied with the information provided.

- There was some concern expressed relative to the number of persons that might vote on the Plan if the voting procedure as used when the 800 MHz Plan was not followed. The concern was addressed by reminding the Committee that 47 CFR §90.527 (b) requires that the Plan provide "***an explanation of how all eligible entities within the region were given an opportunity to participate in the planning process and to have their positions heard and considered fairly***". The member asking the question had been unable to attend earlier meetings when this issue was considered by the Committee with strong sentiment for voting by all eligible entities.

- Finally, there were some questions about the source documents employed in the draft plan with a request to share applicable documents. Source documents come from NPSTC and are too numerous to list. Sample documents will be attached with the email distribution; however, any member may visit the NPSTC site at http://www.npstc.org/nccsubcom.jsp for a complete listing of documents.

4. One caveat relative to the scheduled August 14 meeting was noted during the discussion. Until the bylaws are approved by the Region, there is no mechanism for defining the voting privileges of participants. During the discussion, the members suggested that the Chair of the Technical Committee develop a recommended agenda for the August 14 meeting and further, all of the Region's officers should meet in person before the August 14 meeting so the leadership of the 700 MHz RPC can review the proposed meeting agenda and reach a concurrence as to the manner in which the meeting should be conducted.

5. The meeting concluded at 4:00PM and the changes to the draft for which there was committee concurrence will be incorporated and sent back to the Technical Committee. Unless there is some reason to meet, no further meetings of the Technical Committee for the purpose of reviewing the draft plan are anticipated. The next event for the Plan's review will be the Region meeting on August 14.

Appendix E Table of Interoperability Channels

NOTE: The interoperability nomenclature identified below is for reference only pending finalization of channel labeling recommendations currently before the FCC.

These recommendations originated from the National Coordination Committee (NCC) Interoperability Subcommittee asking for standardized channel nomenclature and labeling. The Federal Communications Commission's decisions on channel labeling can alter these values accordingly. The FCC designated 700 MHz interoperability channels will be administered by the relevant Statewide Interoperability Executive Committees within Federal Communications Commission rules. The FCC's final ruling on interoperability channel labeling and interoperability channel designations and the relevant Statewide Interoperability Executive Committee interpretation of those rules take precedence over any Region 20 recommendation in this plan.

700 MHz Interoperability Channels, Labels, and Usage

LINE ID	FREQ / FCC CHANNEL (SUBSCRIBER LOAD)		BASE, MOBILE, OR FIXED	ELIGIBILITY / PRIMARY USE	ORIGINAL NCC NAME	TASK GROUP CONSENSUS NAME
	RECEIVE	TRANSMIT				
	CHANNEL	CHANNEL	FCC 700 MHz Public Safety Band (TV 63 + 68)			
35	39-40	999-1000	Mobile-Fixed	Calling Channel	7CAL59	7CALL50
36		SIMPLEX	Base-Fixed-Mobile			7CALL50D
37	23-24	983-984	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC58	7TAC51
38		SIMPLEX	Base-Fixed-Mobile			7TAC51D
39	103-104	1063-1064	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC62	7TAC52
40		SIMPLEX	Base-Fixed-Mobile			7TAC52D
41	183-184	1143-1144	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC66	7TAC53
42		SIMPLEX	Base-Fixed-Mobile			7TAC53D
43	263-264	1223-1224	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC70	7TAC54
44		SIMPLEX	Base-Fixed-Mobile			7TAC54D
45	119-120	1079-1080	Mobile-Fixed	General Public Safety Service	7TAC63	7TAC55
46		SIMPLEX	Base-Fixed-Mobile			7TAC55D
47	199-200	1159-1160	Mobile-Fixed	General Public Safety Service	7TAC67	7TAC56
48		SIMPLEX	Base-Fixed-Mobile			7TAC56D
49	319-320	1279-1280	Mobile-Fixed	Other Public Service	7TAC73	7GTAC57
50		SIMPLEX	Base-Fixed-Mobile			7GTAC57D
51	303-304	1263-1264	Mobile-Fixed	Mobile Repeater	7MOB72	7MOB59
52		SIMPLEX	Base-Fixed-Mobile			7MOB59D
53	223-224	1183-1184	Mobile-Fixed	Law Enforcement	7LAW68	7LAW61
54		SIMPLEX	Base-Fixed-Mobile			7LAW61D
55	239-240	1199-1200	Mobile-Fixed	Law Enforcement	7LAW69	7LAW62
56		SIMPLEX	Base-Fixed-Mobile			7LAW62D
57	143-144	1103-1104	Mobile-Fixed	Fire	7FIR64	7FIRE63
58		SIMPLEX	Base-Fixed-Mobile			7FIRE63D
59	159-160	1119-1120	Mobile-Fixed	Fire	7FIR65	7FIRE64
60		SIMPLEX	Base-Fixed-Mobile			7FIRE64D
61	63-64	1023-1024	Mobile-Fixed	EMS	7MED60	7MED65
62		SIMPLEX	Base-Fixed-Mobile			7MED65D
63	79-80	1039-1040	Mobile-Fixed	EMS	7EMS61	7MED66
64		SIMPLEX	Base-Fixed-Mobile			7MED66D
65	279-280	1239-1240	Mobile-Fixed	Mobile Data	7DAT71	7DATA69
66		SIMPLEX	Base-Fixed-Mobile			7DATA69D

LINE ID	FREQ / FCC CHANNEL (SUBSCRIBER LOAD)		BASE, MOBILE, OR FIXED	ELIGIBILITY / PRIMARY USE	ORIGINAL NCC	TASK GROUP CONSENSUS
	RECEIVE	TRANSMIT	OR CONTROL)		NAME	NAME
	CHANNEL	CHANNEL	FCC 700 MHz Public Safety Band (TV 64 + 69)			
67	681-682	1641-1642	Mobile-Fixed	Calling Channel	7CAL75	**7CALL70**
68		SIMPLEX	Base-Fixed-Mobile			**7CALL70D**
69	657-658	1617-1618	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC74	**7TAC71**
70		SIMPLEX	Base-Fixed-Mobile			**7TAC71D**
71	737-738	1697-1698	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC78	**7TAC72**
72		SIMPLEX	Base-Fixed-Mobile			**7TAC72D**
73	817-818	1777-1778	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC82	**7TAC73**
74		SIMPLEX	Base-Fixed-Mobile			**7TAC73D**
75	897-898	1857-1858	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC86	**7TAC74**
76		SIMPLEX	Base-Fixed-Mobile			**7TAC74D**
77	761-762	1721-1722	Mobile-Fixed	General Public Safety Service	7TAC79	**7TAC75**
78		SIMPLEX	Base-Fixed-Mobile			**7TAC75D**
79	841-842	1801-1802	Mobile-Fixed	General Public Safety Service	7TAC83	**7TAC76**
80		SIMPLEX	Base-Fixed-Mobile			**7TAC76D**
81	937-938	1897-1898	Mobile-Fixed	Other Public Service	7TAC89	**7GTAC77**
82		SIMPLEX	Base-Fixed-Mobile			**7GTAC77D**
83	881-882	1841-1842	Mobile-Fixed	Mobile Repeater	7MOB88	**7MOB79**
84		SIMPLEX	Base-Fixed-Mobile			**7MOB79D**
85	801-802	1761-1762	Mobile-Fixed	Law Enforcement	7LAW84	**7LAW81**
86		SIMPLEX	Base-Fixed-Mobile			**7LAW81D**
87	857-858	1817-1818	Mobile-Fixed	Law Enforcement	7LAW85	**7LAW82**
88		SIMPLEX	Base-Fixed-Mobile			**7LAW82D**
89	721-722	1681-1682	Mobile-Fixed	Fire	7FIR80	**7FIRE83**
90		SIMPLEX	Base-Fixed-Mobile			**7FIRE83D**
91	777-778	1737-1738	Mobile-Fixed	Fire	7FIR81	**7FIRE84**
92		SIMPLEX	Base-Fixed-Mobile			**7FIRE84D**
93	641-642	1601-1602	Mobile-Fixed	EMS	7EMS76	**7MED86**
94		SIMPLEX	Base-Fixed-Mobile			**7MED86D**
95	697-698	1657-1658	Mobile-Fixed	EMS	7EMS77	**7MED87**
96		SIMPLEX	Base-Fixed-Mobile			**7MED87D**
97	921-922	1881-1882	Mobile-Fixed	Mobile Data	7DAT87	**7DATA89**
98		SIMPLEX	Base-Fixed-Mobile			**7DATA89D**

Project 25 Common Air Interface Interoperability Channel Parameters

Certain common P25 parameters need to be defined to ensure digital radios operating on the 700 MHz Interoperability Channels can communicate. This is analogous to defining the common CTCSS tone used on NPSPAC analog Interoperability channels.

Network Access Code

In the Project 25 Common Air Interface definition, the Network Access Code (NAC) is analogous to the use of CTCSS and CDCSS signals in analog radio systems. It is a code transmitted in the pre-amble of the P25 signal and repeated periodically throughout the transmission. Its purpose is to provide selective access to and maintain access to a receiver. It is also used to block nuisance and other co-channel signals. There are up to 4096 of these NAC codes. For ease of migration in other frequency bands, a NAC code table was developed which shows a mapping of CTCSS and CDCSS signals into corresponding NAC codes. Document TIA/EIA TSB102.BAAC contains NAC code table and other Project 25 Common Air Interface Reserve Values.

Use of corresponding NAC code $293 is required for the 700 MHz Interoperability Channel NAC code.

Talk group ID

In the Project 25 Common Air Interface definition, the Talk group ID on conventional channels is analogous to the use of talk groups in trunking. In order to ensure that all users can communicate, all units should use a common Talk group ID.

Recommendation: Use P25 default value for Talk group ID = $0001

Manufacturer's ID

The Project 25 Common Air Interface allows the ability to define manufacturer specific functions. In order to ensure that all users can communicate, all units should not use a specific Manufacturer's ID, but should use the default value of $00.

Message ID

The Project 25 Common Air Interface allows the ability to define specific message functions. In order to ensure that all users can communicate, all units should use the default Message ID for unencrypted messages of $0000000000000000000.

Encryption Algorithm ID and Key ID

The Project 25 Common Air Interface allows the ability to define specific encryption algorithms and encryption keys. In order to ensure that all users can communicate,

encryption should not be used on the Interoperability Calling Channels. All units should use the default Algorithm ID for unencrypted messages of $80 and default Key ID for unencrypted messages 0000. These same defaults may be used for the other Interoperability channels when encryption is not used.

Use of encryption is allowed on the other Interoperability channels. Regional Planning Committees need to define appropriate Message ID, Encryption Algorithm ID, and Encryption Key ID to be used in the encrypted mode on Interoperability channels.

Appendix - F Simplified 700 MHz Pre-assignment Rules

Introduction

This paper describes a process for coordinating the initial block assignments of 700 MHz channels before details of actual system deployments is available. In this initial phase, there is little actual knowledge of the specific equipment to be deployed and the exact antenna sites locations. As a result, a simple, high-level method is proposed to establish guidelines for frequency coordination. When actual systems are deployed, additional details will be known and the system designers will be required to select specific sites and supporting hardware to control interference.

Overview

Assignments will be based on a defined service area for each applicant. This will normally be an area defined by geographical or political boundaries such as city, county or by a data file consisting of line segments creating a polygon that encloses the defined area. The service contour is normally allowed to extend slightly beyond the geo/political boundaries such that systems can be designed for maximum signal levels within the boundaries, or coverage area. Systems must also be designed to minimize signal levels outside their geo/political boundaries to avoid interference into the coverage area of other co-channel users.

For co-channel assignments, the 40 dBμ service contour will be allowed to extend beyond the defined service area by 3 to 5 miles, depending on the type of environment: urban, suburban or rural. The co-channel 5 dBμ interfering contour will be allowed to touch but not overlap the 40 dBμ service contour of the system being evaluated. All contours are (50,50).

For adjacent and alternate channels, the 60 dBμ interfering contour will be allowed to touch but not overlap the 40 dBμ service contour of the system being evaluated. All contours are (50,50).

Discussion

Based upon the ERP/HAAT limitations referenced in 47CFR §90.541(a), the maximum field strength will be limited to 40 dB relative to 1μV/m (customarily denoted as 40 dBμ). It is assumed that this limitation will be applied similar to the way it is applied in the 821-824/866-869 MHz band. That is, a 40 dBμ field strength can be deployed up to a defined distance beyond the edge of the service area, based on the size of the service area or type of applicant, i.e. city, county or statewide system. This is important that public safety systems have adequate margins for reliability within their service area in the presence of interference, including the potential for interference from CMRS infrastructure in adjacent bands.

The value of 40 dBμ in the 700 MHz band corresponds to a signal of -92.7 dBm, received by a half-wavelength dipole (λ/2) antenna. The thermal noise floor for a 6.25

kHz bandwidth receiver would be in the range of -126 dBm, so there is a margin of approximately 33 dB available for "noise limited" reliability. Figure 1 shows show the various interfering sources and how they accumulate to form a composite noise floor that can be used to determine the "reliability" or probability of achieving the desired performance in the presence of various interfering sources with differing characteristics.

If CMRS out-of-band emissions (OOBE) noise is allowed to be equal to the original thermal noise floor, there is a 3 dB reduction[9] in the available margin. This lowers the reliability and/or the channel performance of Public Safety systems. The left side of Figure 1 shows that the original 33 dB margin is reduced by 3 dB to only 30 dB available to determine "noise + CMRS OOBE limited" performance and reliability.

There are also different technologies with various channel bandwidths and different performance criteria. C/N in the range of 17 – 20 dB is required to achieve channel performance.

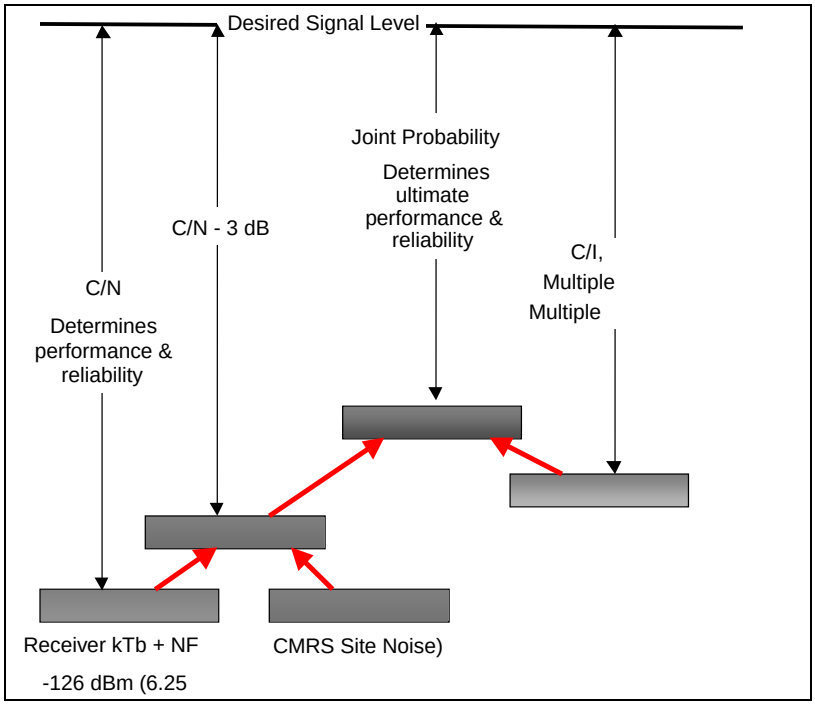


Figure 1 - Interfering Sources Create A "Noise" Level Influencing Reliability

In addition, unknown adjacent and alternate channel assignments need to be accounted for. The co-channel and adjacent/alternate sources are shown in the right hand side of Figure 1. At the edge of the service area, there would normally be only a single co-channel source, but there could potentially be several adjacent or alternate channel sources involved. It is recommended that co-channel assignments limit interference to <1% at the edge of the service area (worst case mile). A C/I ratio of 26.4 dB plus the

[9] TIA TR8 made this 3 dB allowance for CMRS OOBE noise during the meetings in Mesa, AZ, January 2001.

required capture value (~10 dB) is required to achieve this goal.[10].

The ultimate performance and reliability has to take into consideration both the noise sources (thermal & CMRS OOBE) and all the interference sources. The center of Figure 1 shows that the joint probability that the both performance criteria and interference criteria are met must be determined.

Table 1 shows estimated performance considering the 3 dB rise in the noise floor at the 40 dB signal level. Performance varies due to the different Cf/N requirements and noise floors of the different modulations and channel bandwidths.

Note that since little is known about the affects of terrain, an initial lognormal standard deviation of 8 dB is used.

Comparison of Joint Reliability for various				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver ENBW (kHz)	6	6	9	18
Noise Figure(10 dB)	10	10	10	10
Receiver Noise Floor (dBm)	-126.22	-126.22	-124.46	-121.45
Rise in Noise Floor (dB)	3.00	3.00	3.00	3.00
New Receiver Noise Floor (dB)	-123.22	-123.22	-121.46	-118.45
40 dBu = -92.7 dBm	-92.7	-92.7	-92.7	-92.7
Receiver Capture (dB)	10.0	10.0	10.0	10.0
Noise Margin (dB)	30.52	30.52	28.76	25.75
C/N Required for DAQ = 3	17.0	17.0	18.0	20.0
C/N Margin (dB)	**13.52**	**13.52**	**10.76**	**5.75**
Standard deviation (8 dB)	8.0	8.0	8.0	8.0
Z	1.690	1.690	1.345	0.718
Noise Reliability (%)	**95.45%**	**95.45%**	**91.06%**	**76.37%**
C/I for <1% prob of capture	36.4	36.4	36.4	36.4
I (dBu)	3.7	3.7	3.7	3.7
I (dBm)	-129.0	-129.0	-129.0	-129.0
Joint Probability (C & I)	**94.7%**	**94.7%**	**90.4%**	**76.1%**
40 dBu = -92.7 dBm @ 770 MHz				

Table 1 Joint Probability For Project 25, 700 MHz Equipment Configurations.

These values are appropriate for a mobile on the street, but are considerably short to provide reliable communications to portables inside buildings.

[10] See Appendix A for an explanation of how the 1% interference value is defined and derived.

Portable In-Building Coverage

Most Public Safety communications systems, today, are designed for portable in-building[11] coverage and the requirement for >95 % reliable coverage. To analyze the impact of requiring portable in building coverage and designing to a 40 dBμ service contour, several scenarios are presented. The different scenarios involve a given separation from the desired sites. Whether simulcast or multi-cast is used in wide-area systems, the antenna sites must be placed near the service area boundary and directional antennas, directed into the service area, must be used. The impact of simulcast is included to show that the 40 dBμ service contour must be able to fall outside the edge of the service area in order to meet coverage requirements at the edge of the service area. From the analysis, recommendations are made on how far the 40 dBμ service contour should extend beyond the service area.

Table 2 estimates urban coverage where simulcast is required to achieve the desired portable in building coverage. Several assumptions are required to use this estimate.

- Distance from the location to each site. Equal distance is assumed.
- CMRS noise is reduced when entering buildings. This is not a guarantee as the type of deployments is unknown. It is possible that CMRS units may have transmitters inside buildings. This could be potentially a large contributor unless the CMRS OOBE is suppressed to TIA's most recent recommendation and the "site isolation" is maintained at 65 dB minimum.
- The 40 dBμ service contour is allowed to extend beyond the edge of the service area boundary.
- Other configurations may be deployed utilizing additional sites, lower tower heights, lower ERP and shorter site separations.

Estimated Performance at 2.5 miles from each site				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver Noise Floor (dBm)	-126.20	-126.20	-124.50	-118.50
Signal at 2.5 miles (dBm)	-72.7	-72.7	-72.7	-72.7
Margin (dB)	53.50	53.50	51.80	45.80
C/N Required for DAQ = 3	17.0	17.0	18.0	20.0
Building Loss (dB)	20	20	20	20
Antenna Loss (dBd)	8	8	8	8
Reliability Margin	8.50	8.50	5.80	-2.20
Z	1.0625	1.0625	0.725	-0.275
Single Site Noise Reliability (%)	85.60%	85.60%	76.58%	39.17%
Simulcast with 2 sites	97.93%	97.93%	94.51%	62.99%
Simulcast with 3 sites	99.70%	99.70%	98.71%	77.49%
Simulcast with 4 sites	99.96%	99.96%	99.70%	86.30%

[11] Building penetration losses typically required for urban = 20 dB, suburban = 15 dB, rural = 10 dB.

Table 2, Estimated Performance From Site(s) 2.5 Miles From Typical Urban Buildings.

Table 2 shows for the example case of 2.5 miles a single site cannot provide >95% reliability. Either more sites must be used to reduce the distance or other system design techniques must be used to improve the reliability. For example, the table shows that simulcast can be used to achieve public safety levels of reliability at this distance. Table 2 also shows that the difference in performance margin requirements for wider bandwidth channels requires more sites and closer site-to-site separation.

Figures 2 and 3 show how the configurations would potentially be deployed for a typical site with 240 Watts ERP. This is based on:

• 75 Watt transmitter,	18.75 dBW
• 200 foot tower	
• 10 dBd 180 degree sector antenna	+10.0 dBd
• 5 dB of cable/filter loss.	- 5.0 dB
	23.75 dBW ≈ 240 Watts (ERPd)

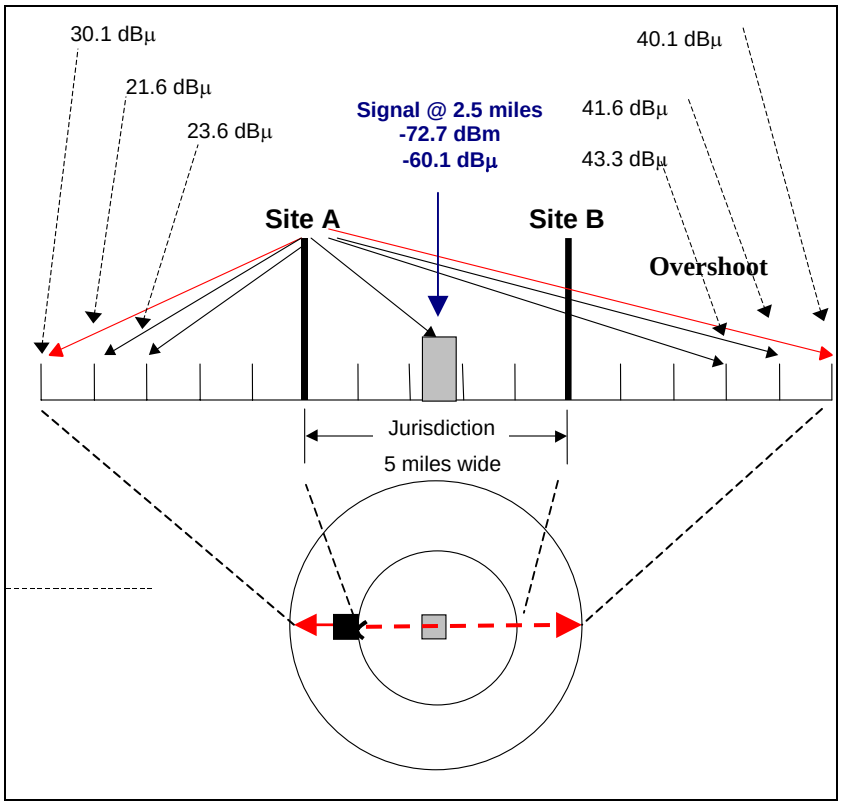


Figure 2 - Field Strength From Left Most Site.

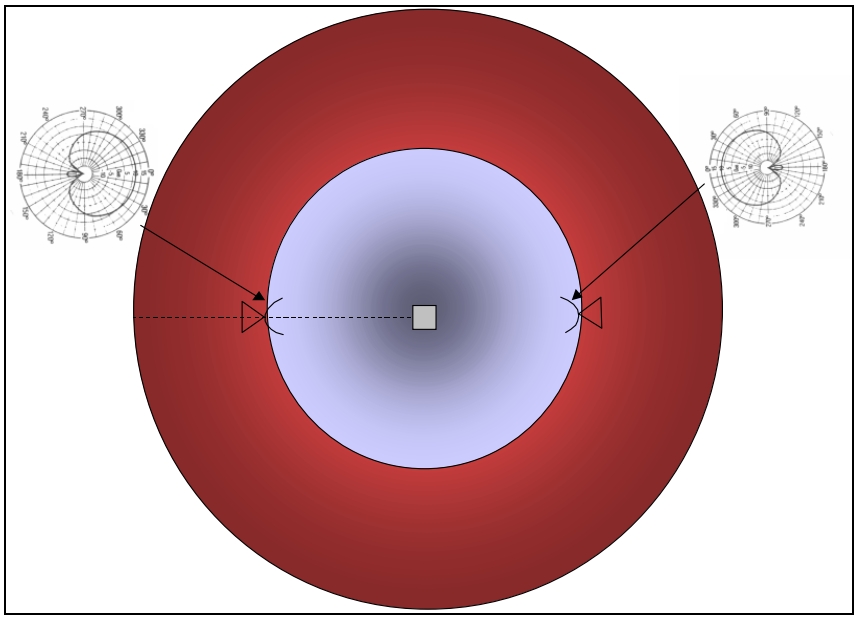


Figure 3 - Antenna Configuration Required To Limit Field Strength Off "Backside"

Figure 2 is for an urbanized area with a jurisdiction defined as a 5 mile circle. To provide the necessary coverage to portables in buildings at the center of the jurisdiction requires that the sites be placed along the edge of the service area and utilize directional antennas oriented toward the center of the service area (Figure 3). In this case, at 5 miles beyond the edge of the service area, the sites would produce a composite field strength of approximately 40 dBμ. Since one site is over 10 dB dominant, the contribution from the other site is not considered. The control of the field strength behind the site relies on a 20 dB antenna with a Front to Back Ratio (F/B) specification as shown in Figure 3. This performance may be optomistic due to back scatter off local obstructions in urbanized areas. However, use of antennas on the sides of buildings can assist in achieving better F/B ratios and the initial planning is not precise enough to prohibit using the full 20 dB.

The use of a single site at the center of the service area is not normally practical. To provide the necessary signal strength at the edge of the service area would produce a field strength 5 miles beyond in excess of 44 dBμ. However, if the high loss buildings were concentrated at the service area's center, then potentially a single site could be deployed, assuming that the building loss sufficiently decreases near the edge of the service area allowing a reduction in ERP to achieve the desired reliability.

Downtilting of antennas, instead of directional antennas, to control the 40 dBμ is not practical, in this scenario. For a 200 foot tall tower, the center of radiation from a 3 dB down-tilt antenna hits the ground at ~ 0.75 miles[12]. The difference in angular discrimination from a 200 foot tall tower at service area boundary at 5 miles and service contour at 10 miles is approximately 0.6 degrees, so ERP is basically the same as ERP

[12] Use of high gain antennas with down-tilt on low-level sites is one of the causes of far-near interference experienced in the 800 MHz band.

toward the horizon. It would not be possible to achieve necessary signal strength at service area boundary and have 40 dBμ service contour be less than 5 miles away.

Tables 3 and 4 represent the same configuration, but for less dense buildings. In these cases, the distance to extend the 40 dBμ service contour can be determined from Table 5.

Estimated Performance at 3.5 miles from each site				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver Noise Floor (dBm)	-126.20	-126.20	-124.50	-118.50
Signal at 3.5 miles (dBm)	-77.7	-77.7	-77.7	-77.7
Margin (dB)	48.50	48.50	46.80	40.80
C/N Required for DAQ = 3	17.0	17.0	18.0	20.0
Building Loss (dB)	15	15	15	15
Antenna Loss (dBd)	8	8	8	8
Reliability Margin	8.50	8.50	5.80	-2.20
Z	1.0625	1.0625	0.725	-0.275
Single Site Noise Reliability (%)	**85.60%**	**85.60%**	**76.58%**	**39.17%**
Simulcast with 2 sites	97.93%	97.93%	94.51%	62.99%
Simulcast with 3 sites	99.70%	99.70%	98.71%	77.49%
Simulcast with 4 sites	99.96%	99.96%	99.70%	86.30%

Table 3 - Lower Loss Buildings, 3.5 Mile From Site(s)

Estimated Performance at 5.0 miles from each site				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver Noise Floor (dBm)	-126.20	-126.20	-124.50	-118.50
Signal at 5.0 miles (dBm)	-82.7	-82.7	-82.7	-82.7
Margin (dB)	43.50	43.50	41.80	35.80
C/N Required for DAQ = 3	17.0	17.0	18.0	20.0
Building Loss (dB)	10	10	10	10
Antenna Loss (dBd)	8	8	8	8
Reliability Margin	8.50	8.50	5.80	-2.20
Z	1.0625	1.0625	0.725	-0.275
Single Site Noise Reliability (%)	**85.60%**	**85.60%**	**76.58%**	**39.17%**
Simulcast with 2 sites	97.93%	97.93%	94.51%	62.99%
Simulcast with 3 sites	99.70%	99.70%	98.71%	77.49%
Simulcast with 4 sites	99.96%	99.96%	99.70%	86.30%

Table 4 - Low Loss Buildings, 5.0 Miles From Site(s)

Note that the receive signals were adjusted to offset the lowered building penetration loss. This produces the same numerical reliability results, but allows increasing the site to building separation and this in turn lowers the magnitude of the “overshoot” across the service area.

Table 5 shows the field strength for a direct path and for a path reduced by a 20 dB F/B antenna. This allows the analysis to be simplified for the specific example being discussed.

	Site A Direct Path	Site B Back Side of 20 dB F/B Antenna
Overshoot Distance (mi)	Field Strength (dBμ)	Field Strength (dBμ)
1	73.3	53.3
2	63.3	43.3
2.5	60.1	40.1
3	57.5	37.5
4	53.3	33.5
5	50.1	30.1
…	…	
10	40.1	
11	38.4	
12	37.5	
13	36.0	
14	34.5	
15	33.0	

Table 5 - Field Strength Vs. Distance From Site

For the scenarios above, the composite level at the Service Contour is the sum of the signals from the two sites. The sum can not exceed 40 dBμ. Table 5 allows you to calculate the distance to Service Contour given the distance from one of the sites.

Scenario 1: Refer to Figure 3a. Site B is just inside the Service Area boundary and Service Contour must be <5 Miles outside Service Area boundary. Signal level at Service Contour from Site B is 30.1 dBμ. Signal level for Site A can be up to 40 dBμ, since when summing two signals with >10 dB delta, the lower signal level has little effect (less than 0.4 dB in this case). Therefore, Site A can be 10 miles from the Service Contour, or 5 miles inside the Service Area boundary. The coverage perfomance for this scenario is shown in Table 2, above, for 20 dB building loss typical of urban areas.

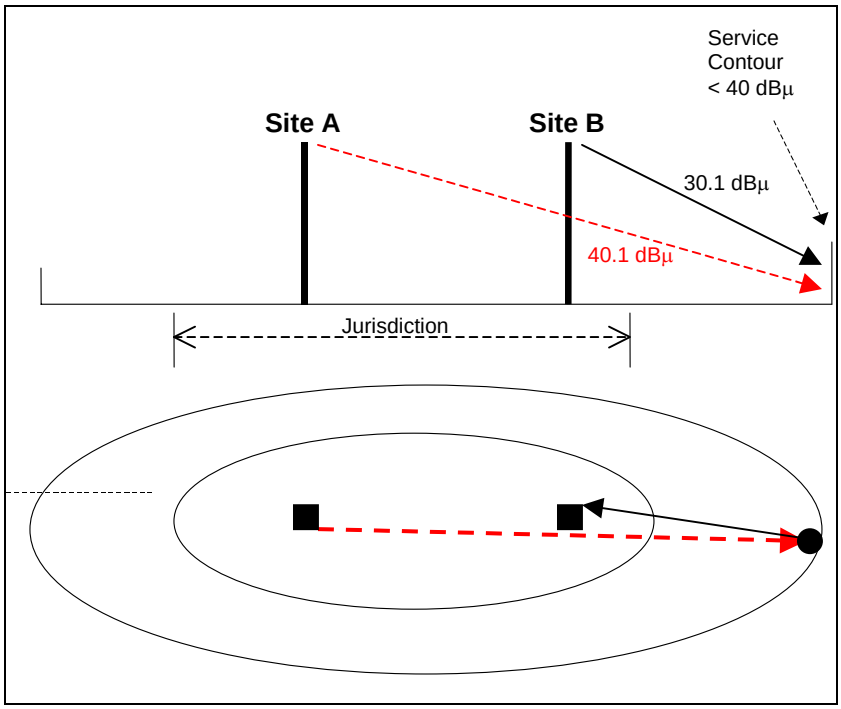


Figure 3a. Scenario 1 on of Use of Table 5

Scenario 2: Refer to bold data in Table 5. Site B is just inside the Service Area boundary and Service Contour must be <4 Miles outside Service Area boundary. Signal level at Service Contour from Site B is 33.5 dBμ. Signal level for Site A can be up to 38.4 dBμ. (See Appendix B for simple method to sum the powers of signals expressed in decibels.) The composite power level is 39.7 dBμ. Therefore, Site A can be slightly less than 11 miles from the Service Contour, or ~7 miles inside the Service Area boundary. The coverage perfomance for this example is shown in Table 3, above, for 15 dB building loss typical of suburban areas.

Scenario 3: Site B is just inside the Service Area boundary and Service Contour must be <3 Miles outside Service Area boundary. Signal level at Service Contour from Site B is 37.5 dBμ. Signal level for Site A can be up to 36.4 dBμ. (See Appendix B simple method to sum signals expressed in decibels.) The composite power level is 40.0 dBμ. Therefore, Site A can be ~13 miles from the Service Contour, or ~10 miles inside the Service Area boundary. The coverage perfomance for this example is shown in Table 4, above, for 10 dB building loss typical of rural areas.

Service Contour Extension Recommendation

The resulting recommendation for extending the 40 dBμ service contour beyond the service area boundary is:

Type of Area	Extension (mi.)
Urban (20 dB Buildings)	5
Suburban (15 dB Buildings)	4
Rural (10 dB Buildings)	3

Table 6 - Recommended Extension Distance Of 40 dBμ Field Strength

Using this recommendation the 40 dBμ service contour can then be constructed based on the defined service area without having to perform an actual prediction.

Interfering Contour

Table 1 above shows that 36.4 dB of margin is required to provide 10 dB of co-channel capture and <1% probability of interference. Since the 40 dBμ service contour is beyond the edge of the service area, some relaxation in the level of interference is reasonable. Therefore, a 35 dB co-channel C/I ratio is recommended and is consistent with what is currently being licensed in the 821-824/866-869 MHz Public Safety band.

Co-Channel Interfering Contour Recommendation

- Allow the constructed 40 dBμ (50,50) service contour to extend beyond the edge of the defined service area by the distance indicated in Table 6.
- Allow the 5 dBμ (50,50) interfering contour to intercept but not overlap the 40 dBμ service contour.

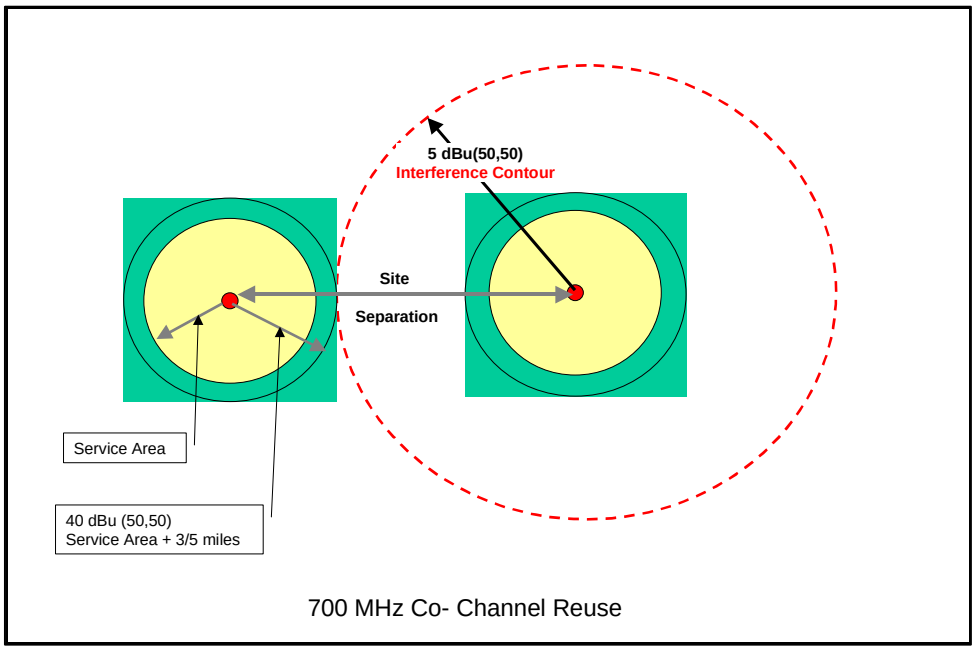


Figure 4 - Co-Channel Reuse Criterion

Adjacent and Alternate Channel Considerations

Adjacent and alternate channels are treated as being noise sources that alter the composite noise floor of a victim receiver. Using the 47 CFR §90.543 values of ACCP can facilitate the coordination of adjacent and alternate channels. The C/I requirements for <1% interference can be reduced by the value of ACCPR. For example to achieve an X dB C/I for the adjacent channel that is -40 dBc a C/I of [X-40] dB is required. Where the alternate channel ACP value is -60 dBc, then the C/I = [X-60] dB is the goal for assignment(s). There is a compounding of interference energy, as there are numerous sources, i.e. co channel, adjacent channels and alternate channels plus the noise from CMRS OOBE.

There is insufficient information in 47 CFR §90.543 to include the actual receiver performance. Receivers typically have “skirts” that allow energy outside the bandwidth of interest to be received. In addition, the FCC defines ACCP differently than does the TIA. The term used by the FCC is the same as the TIA definition of ACP. The subtle difference is that ACCP defines the energy intercepted by a defined receiver filter (e.g., 6 kHz ENBW). ACP defines the energy in a measured bandwidth that is typically wider than the receiver (e.g., 6.25 kHz channel bandwidth). As a result, the FCC values are optimistic at very close spacing and somewhat pessimistic at wider spacings, as the typical receiver filter is less than the channel bandwidth.

In addition, as channel bandwidth is increased, the total amount of noise intercepted rises compared to the level initially defined in a 6.25 kHz channel bandwidth. However, the effect is diminished at very close spacings as the slope of the noise curve falls off rapidly. At greater spacings, the slope of the noise curve is essentially flat and the

receiver's filter limits the noise to a rise in the thermal noise floor.

Digital receivers tend to be less tolerant to interference than analog. Therefore, a 3 dB reduction in the C/(I+N) can reduce a DAQ = 3 to a DAQ = 2, which is threshold to complete muting in digital receivers. Therefore to maintain a DAQ = 3, at least 17 dB of fading margin plus the 26.4 dB margin for keeping the interference below 1% probability is required, for a total margin of 43.4 dB. However, this margin would be at the edge of the service area and the 40 dBμ service contour is allowed to extend past the edge of the service area.

Frequency drift is controlled by the FCC requirement for 0.4-ppm stability when locked. This equates to approximately a 1 dB standard deviation, which is negligible when associated with the recommended initial lognormal standard deviation of 8 dB and can be ignored.

Project 25 requires that a transceiver receiver have an ACIPR of 60 dB. This implies that an ACCPR ≥ 65 dB will exist for a "companion receiver". A companion receiver is one that is designed for the specific modulation. At this time the highest likelihood is that receivers will be deploying the following receiver bandwidths at the following channel bandwidths.

Estimated Receiver Parameters	
Channel Bandwidth	Receiver Bandwidth
6.25 kHz	5.5 kHz
12.5 kHz	5.5 or 9 kHz
25 kHz	18.0 kHz

Table 7 - Estimated Receiver Parameters

Based on 47 CFR §90.543 and the P25 requirement for an ACCPR ≥ 65 dB into a 6.0 kHz channel bandwidth and leaving room for a migration from Phase 1 to Phase 2, allows for making the simplifying assumption that 65 dB ACCPR is available for both adjacent 25 kHz spectrum blocks.

The assumption is that initial spectrum coordination sorts are based on 25 kHz bandwidth channels. This provides the maximum flexibility by using 65 dB ACCPR for all but one possible combination of 6.25 kHz channels within the 25 kHz allotment.

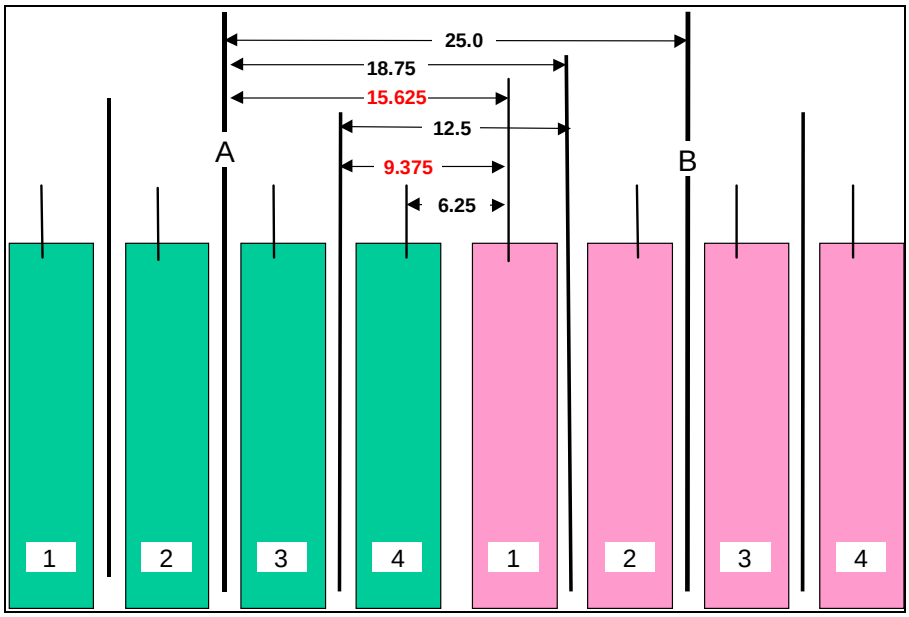


Figure 5, Potential Frequency Separations

Case	Spacing	ACCPR
25 kHz to 25 kHz	25 kHz	65 dB
25 kHz to 12.5 kHz	18.750 kHz	65 dB
25 kHz to 6.25 kHz	15.625 kHz	>40 dB
12.5 kHz to 12.5 kHz	12.5 kHz	65 dB
12.5 kHz to 6.25 kHz	9.375 kHz	>40 dB
6.25 kHz to 6.25 kHz	6.25 kHz	65 dB

Table 8 - ACCPR Values For Potential Frequency Separations

All cases meet or exceed the FCC requirement. The most troublesome cases occur where the wider bandwidths are working against a Project 25 Phase 2 narrowband 6.25 kHz channel. This pre-coordination based upon 25 kHz spectrum blocks still works if system designers and frequency coordinators keep this consideration in mind and move the edge 6.25 kHz channels inward away from the edge of the system. This approach allows a constant value of 65 dB ACCPR to be applied across all 25 kHz spectrum blocks regardless of what channel bandwidth is eventually deployed. There will also be additional coordination adjustments when exact system design details and antenna sites are known.

For spectrum blocks spaced farther away, it must be assumed that transmitter filtering, in addition to transmitter performance improvements due to greater frequency separation, will further reduce the ACCPR.

Therefore it is recommended that a consistent value of 65 dB ACCPR be used for the initial coordination of adjacent 25 kHz channel blocks. Rounding to be conservative due to the possibility of multiple sources allows the Adjacent Channel Interfering Contour to be approximately 20 dB above the 40 dBμ service contour, at 60 dBμ.

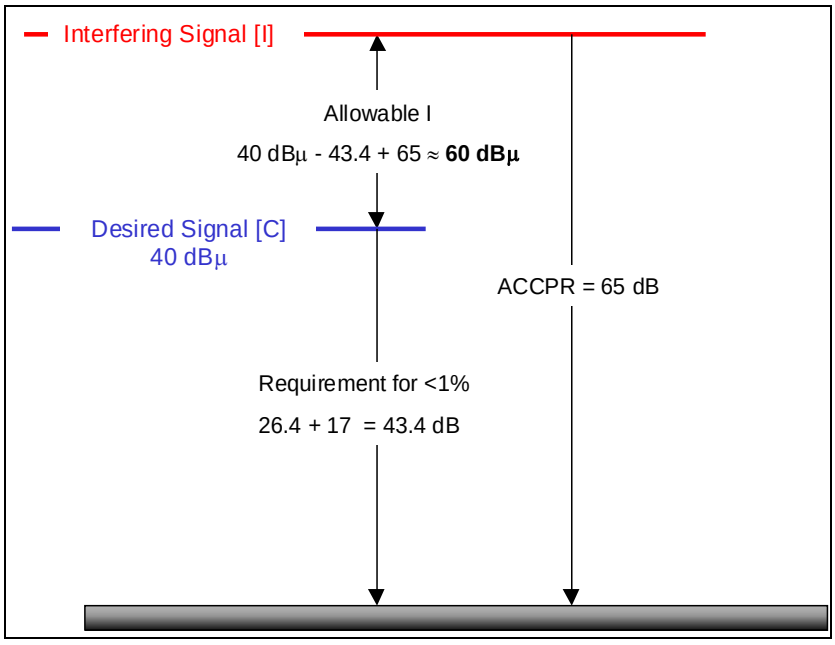


Figure 6 - Adjusted Adjacent 25 kHz Channel Interfering Contour Value

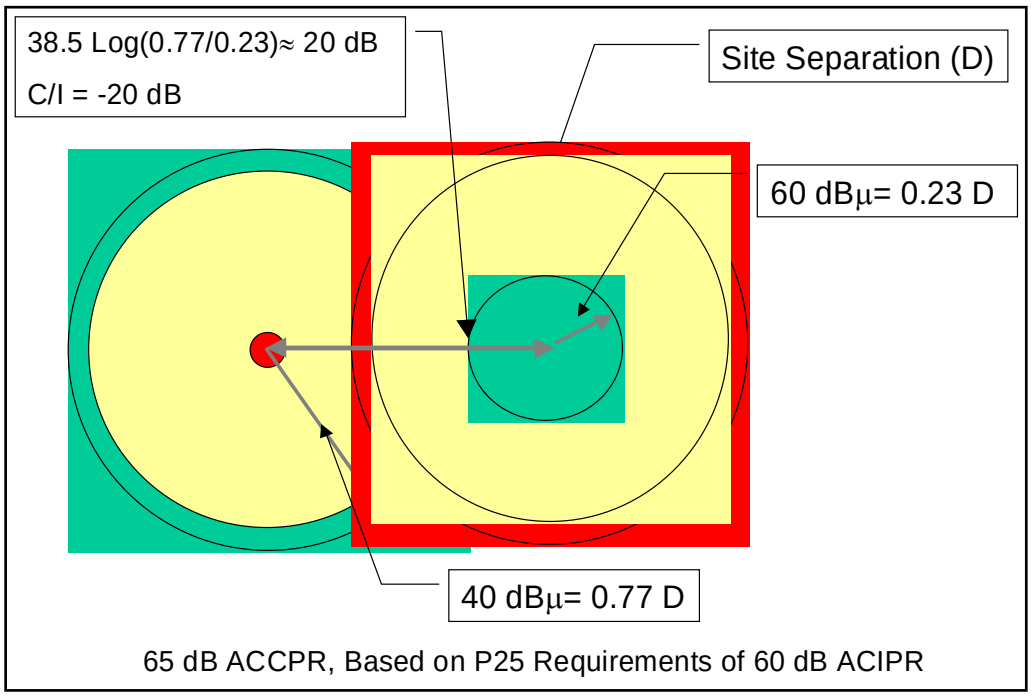


Figure 7 - Example Of Adjacent/Alternate Overlap Criterion

Adjacent Channel Interfering Contour Recommendation

An adjacent (25 kHz) channel shall be allowed to have its 60 dBμ (50,50) interfering contour touch but not overlap the 40 dBμ (50,50) service contour of a system being evaluated. Evaluations should be made in both directions.

Final Detailed Coordination

This simple method is only adequate for presorting large blocks of spectrum to potential entities. A more detailed analysis should be executed in the actual design phase to take all the issues into consideration.

Additional factors that should be considered include:

- Degree of Service Area Overlap
- Different size of Service Areas
- Different ERPs and HAATs
- Actual Terrain and Land Usage
- Differing User Reliability Requirements
- Migration from Project 25 Phase 1 to Phase 2
- Actual ACCP
- Balanced Systems
- Mobiles vs. Portables
- Use of voting
- Use of simulcast
- Radio specifications
- Simplex Operation
- Future unidentified requirements.

Special attention needs to be paid to the use of simplex operation. In this case, an interferer can be on an offset adjacent channel and in extremely close proximity to the victim receiver. This is especially critical in public safety where simplex operations are frequently used at a fire scene or during police operation. This type operation is also quite common in the lower frequency bands. In those cases, evaluation of base-to-base as well as mobile-to-mobile interference should be considered and evaluated.

Sub-Appendix A

Carrier to Interference Requirements

There are two different ways that Interference is considered.

- Co Channel
- Adjacent and Alternate Channels

Both involve using a C/I ratio. The C/I ratio requires a probability be assigned. For example, if 10% Interference is specified, the C/I implies 90% probability of successfully achieving the desired ratio. 1% interference means that there is a 99% probability of achieving the desired C/I.

$$\frac{C}{I}\% = \frac{1}{2} \bullet erfc\left(\frac{\frac{C}{I}\text{margin}}{2\sigma}\right) \quad (1)$$

This can also be written in a form using the standard deviate unit (*Z*). In this case the *Z* for the desired probability of achieving the C/I is entered. For example, for a 90% probability of achieving the necessary C/I, *Z* = 1.28.

$$\frac{C}{I}\% = Z \cdot \sqrt{2} \cdot \sigma \quad (2)$$

The most common requirements for several typical lognormal standard deviations (μ) are included in the following table based on Equation (2).

Location Standard Deviation (μ) dB	5.6	6.5	8	10
Probability %				
10%	10.14 dB	11.77 dB	14.48 dB	18.10 dB
5%	13.07 dB	15.17 dB	18.67 dB	23.33 dB
4%	13.86 dB	16.09 dB	19.81 dB	24.76 dB
3%	14.90 dB	17.29 dB	21.28 dB	26.20 dB
2%	16.27 dB	18.88 dB	23.24 dB	29.04 dB
1%	18.45 dB	21.42 dB	26.36 dB	32.95 dB

Table A1 - Probability Of Not Achieving C/I For Various Location Lognormal Standard Deviations

These various relationships are shown in Figure A1, a continuous plot of equation(s) 1 and 2.

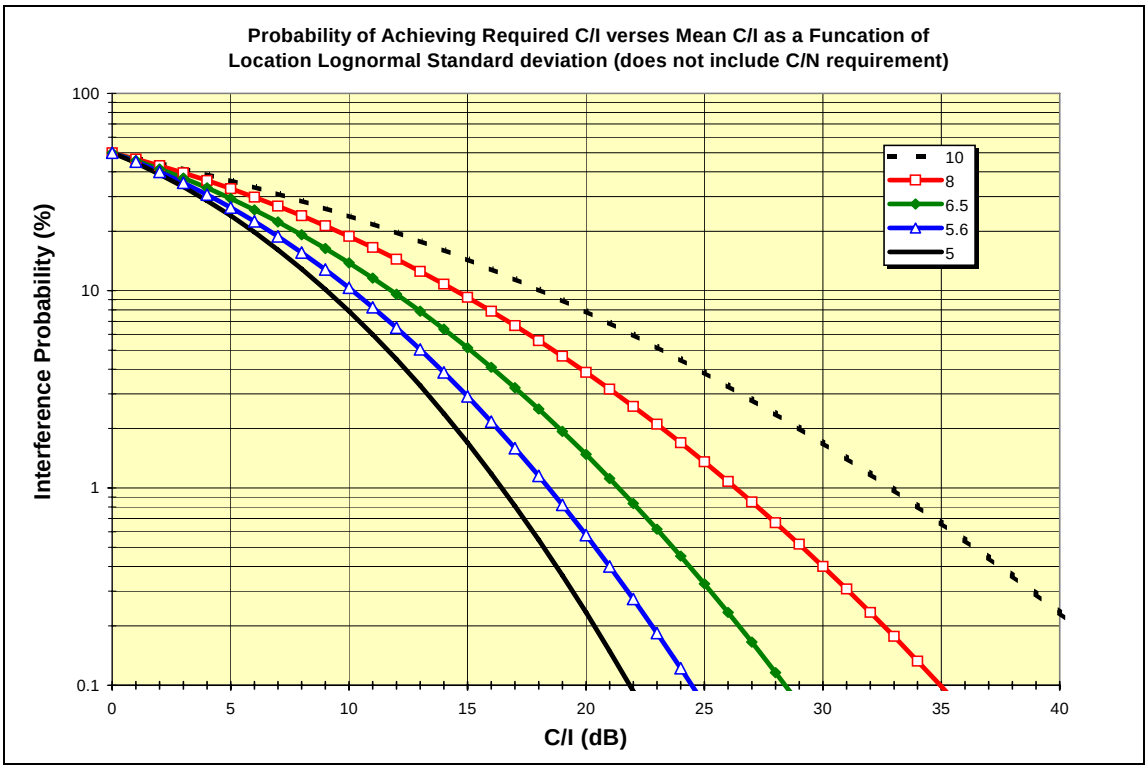


Figure A1, Probability of Achieving Required C/I As A Function Of Location Standard Deviation

For co-channel the margin needs to include the "capture" requirement. When this is done, then a 1% probability of co channel interference can be rephrased to mean, there is a 99% probability that the "capture ratio" will be achieved. The capture ratio varies with the type of modulation. Older analog equipment has a capture ratio of approximately 7 dB. Project 25 FDMA is specified at 9 dB. Figure A1 shows the C/I requirement without including the capture requirement.

The 8 dB value for lognormal location standard deviation is reasonable when little information is available. Later when a detailed design is required, additional details and high-resolution terrain and land usage databases will allow a lower value to be used. The TIA recommended value is 5.6 dB. Using 8 dB initially and changing to 5.6 dB provides additional flexibility necessary to complete the final system design.

To determine the desired probability that both the C/N and C/I will be achieved requires that a joint probability be determined. Figure A2 shows the effects of a family of various levels of C/N reliability and the joint probability (Y-axis) in the presence of various probabilities of Interference. Note that at 99% reliability with 1% interference (X-axis) that the reduction is nearly the difference. This is because the very high noise

reliability is degraded by the interference, as there is little probability that the noise criterion will not be satisfied. At 90%, the 1% interference has a greater likelihood that it will occur simultaneously when the noise criterion not being met, resulting in less degradation of the 90%.

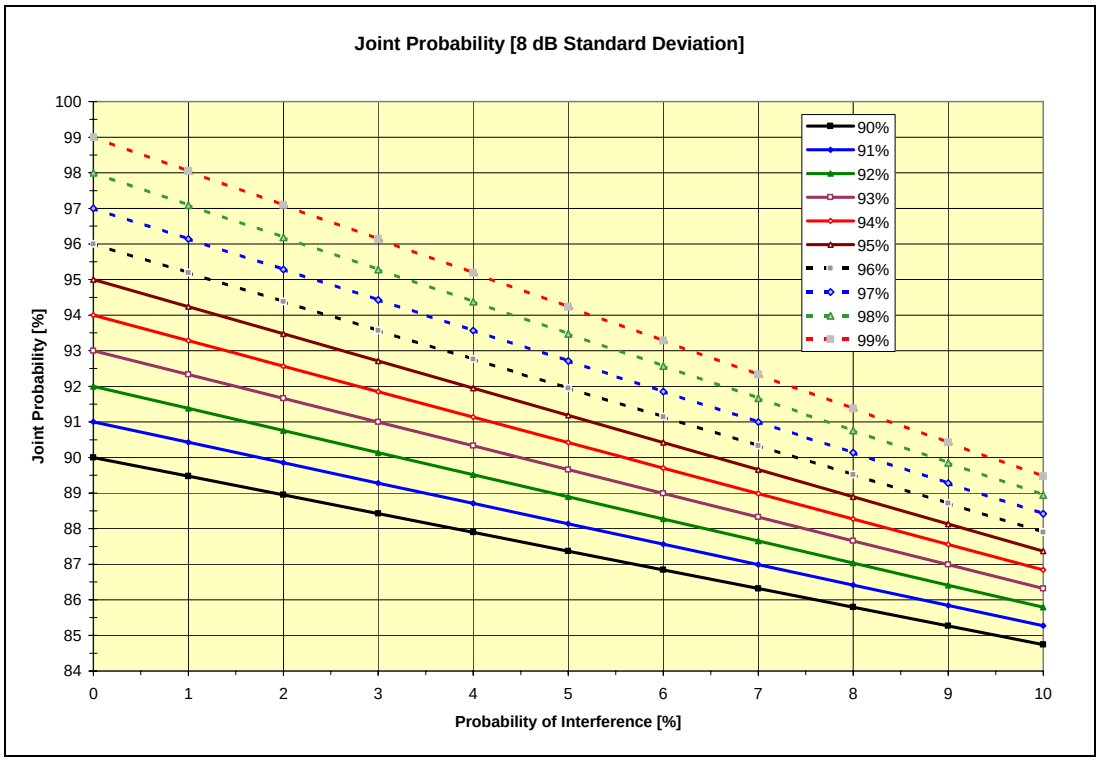
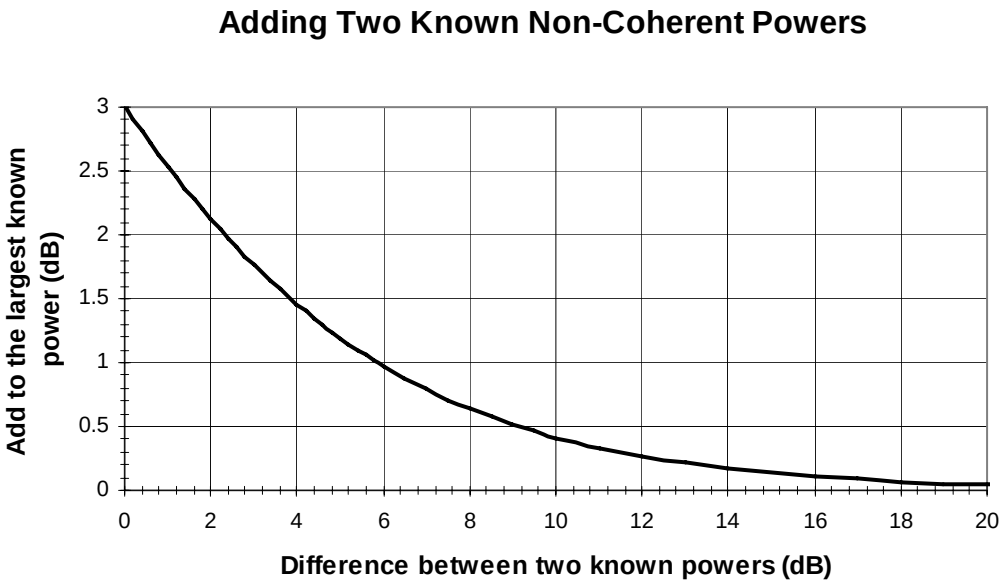


Figure A2 - Effect Of Joint Probability On The Composite Probability

For adjacent and alternate channels, the channel performance requirement must be added to the C/I ratio. When this is applied, then a 1% probability of adjacent/alternate channel interference can be rephrased to mean, there is a 99% probability that the "channel performance ratio" will be achieved.

Sub-Appendix B



In order to sum the power of two or more signals expressed in dBm or dBμ, they level should be converted to a voltage level or a power level, summed (root of the sum of the squares), and then converted back to dBm or dBμ.

The chart above provides simple method to sum two power levels expressed in dBm or dBμ. First find the difference between the two signals on the horizontal axis. Go up to the curve and across to the vertical axis to find the power delta. Add the power delta to the larger of the two original signal levels.

Example 1: Signal A is 36.4 dBμ. Signal B is 37.5 dBμ. Difference is 1.1 dB. Power delta is about 2.5 dB. Composite signal level is 37.5 dBμ + 2.5 dB = 40 dBμ.

Example 2: Signal is –96.3 dBm. Signal B is –95.2 dBm. Difference is 1.1 dB. Power delta is about 2.5 dB. Composite signal level is –95.2 dBm + 2.5 dB = -92.7 dBm.

Appendix G – Channel Assignments by Geographic Area

The Region 20 Channel allocations have been generally established by the National Public Safety Telecommunications Council's channel packing program, CAPRAD. Some minor modifications have been made to the CAPRAD assignments in recognition of independent cities as well as jurisdictions with critical interoperability requirements. Region 20 anticipates an open filing window where applicants can apply for available channels in their jurisdictional area, until all channels are depleted. A "Jurisdictional Area" is defined as an area consisting of the area within the city or county as well as a distance of up to 10 miles outside of the county. It is anticipated this extended county area will enable Region 20 to maximize channel re-use of any "orphan" remainders.

State and other channels not under the authority by Region 20 are identified only for reference to the appropriately designated used pursuant to 47 C.F.R. §90 Subpart R.

Channel	Channel	Comments
1	961	Low power - ERP not to exceed 2 watts - Generic public safety use
2	962	Low power - ERP not to exceed 2 watts - Generic public safety use
3	963	Low power - ERP not to exceed 2 watts - Generic public safety use
4	964	Low power - ERP not to exceed 2 watts - Generic public safety use
5	965	Low power - ERP not to exceed 2 watts - Fire/EMS use
6	966	Low power - ERP not to exceed 2 watts - Fire/EMS use
7	967	Low power - ERP not to exceed 2 watts - Fire/EMS use
8	968	Low power - ERP not to exceed 2 watts - Fire/EMS use
9	969	Low power - ERP not to exceed 2 watts; Itinerant use
10	970	Low power - ERP not to exceed 2 watts; Itinerant use
11	971	Low power - ERP not to exceed 2 watts; Itinerant use
12	972	Low power - ERP not to exceed 2 watts; Itinerant use
13	973	Allegany County, MD, Montgomery County, MD
14	974	Allegany County, MD, Montgomery County, MD
15	975	Allegany County, MD, Montgomery County, MD
16	976	Allegany County, MD, Montgomery County, MD
17	977	Baltimore County, MD, Wicomico County, MD, Prince William County, VA
18	978	Baltimore County, MD, Wicomico County, MD, Prince William County, VA
19	979	Baltimore County, MD, Wicomico County, MD, Prince William County, VA
20	980	Baltimore County, MD, Wicomico County, MD, Prince William County, VA
21	981	Reserved for secondary trunking
22	982	Reserved for secondary trunking
23	983	Designated for nationwide interoperability and use; Narrowband trunking
24	984	Designated for nationwide interoperability and use; Narrowband trunking
25	985	State channel
26	986	State channel
27	987	State channel
28	988	State channel
29	989	State channel
30	990	State channel

31	991	State channel
32	992	State channel
33	993	State channel
34	994	State channel
35	995	State channel
36	996	State channel
37	997	Undesignated and reserved
38	998	Undesignated and reserved
39	999	Designated for nationwide interoperability and use; Narrowband calling
40	1000	Designated for nationwide interoperability and use; Narrowband calling
41	1001	Carroll County, MD, Queen Anne's County, Worcester County, MD, Stafford County, VA
42	1002	Carroll County, MD, Queen Anne's County, Worcester County, MD, Stafford County, VA
43	1003	Carroll County, MD, Queen Anne's County, Worcester County, MD, Stafford County, VA
44	1004	Carroll County, MD, Queen Anne's County, Worcester County, MD, Stafford County, VA
45	1005	Prince George's County, MD
46	1006	Prince George's County, MD
47	1007	Prince George's County, MD
48	1008	Prince George's County, MD
49	1009	City of Baltimore, MD, Fauquier County, VA
50	1010	City of Baltimore, MD, Fauquier County, VA
51	1011	City of Baltimore, MD, Fauquier County, VA
52	1012	City of Baltimore, MD, Fauquier County, VA
53	1013	Montgomery County, MD, Somerset County, MD
54	1014	Montgomery County, MD, Somerset County, MD
55	1015	Montgomery County, MD, Somerset County, MD
56	1016	Montgomery County, MD, Somerset County, MD
57	1017	Prince William County, VA
58	1018	Prince William County, VA
59	1019	Prince William County, VA
60	1020	Prince William County, VA
61	1021	Undesignated and reserved
62	1022	Undesignated and reserved
63	1023	Designated for nationwide interoperability and use
64	1024	Designated for nationwide interoperability and use
65	1025	State channel
66	1026	State channel
67	1027	State channel
68	1028	State channel
69	1029	State channel
70	1030	State channel
71	1031	State channel
72	1032	State channel
73	1033	State channel
74	1034	State channel
75	1035	State channel
76	1036	State channel
77	1037	Undesignated and reserved
78	1038	Undesignated and reserved
79	1039	Designated for nationwide interoperability and use

80	1040	Designated for nationwide interoperability and use
81	1041	Anne Arundel County, MD, Worcester County, MD
82	1042	Anne Arundel County, MD, Worcester County, MD
83	1043	Anne Arundel County, MD, Worcester County, MD
84	1044	Anne Arundel County, MD, Worcester County, MD
85	1045	Allegany County, MD, Talbot County, MD, Arlington County, VA
86	1046	Allegany County, MD, Talbot County, MD, Arlington County, VA
87	1047	Allegany County, MD, Talbot County, MD, Arlington County, VA
88	1048	Allegany County, MD, Talbot County, MD, Arlington County, VA
89	1049	City of Baltimore, MD, Wicomico County, MD, Stafford County, VA
90	1050	City of Baltimore, MD, Wicomico County, MD, Stafford County, VA
91	1051	City of Baltimore, MD, Wicomico County, MD, Stafford County, VA
92	1052	City of Baltimore, MD, Wicomico County, MD, Stafford County, VA
93	1053	Prince George's County, MD
94	1054	Prince George's County, MD
95	1055	Prince George's County, MD
96	1056	Prince George's County, MD
97	1057	Baltimore County, MD
98	1058	Baltimore County, MD
99	1059	Baltimore County, MD
100	1060	Baltimore County, MD
101	1061	Reserved for secondary trunking
102	1062	Reserved for secondary trunking
103	1063	Designated for nationwide interoperability and use; Narrowband trunking
104	1064	Designated for nationwide interoperability and use; Narrowband trunking
105	1065	State channel
106	1066	State channel
107	1067	State channel
108	1068	State channel
109	1069	State channel
110	1070	State channel
111	1071	State channel
112	1072	State channel
113	1073	State channel
114	1074	State channel
115	1075	State channel
116	1076	State channel
117	1077	Undesignated and reserved
118	1078	Undesignated and reserved
119	1079	Designated for nationwide interoperability and use
120	1080	Designated for nationwide interoperability and use
121	1081	Dorchester County, MD, City of Alexandria, VA
122	1082	Dorchester County, MD, City of Alexandria, VA
123	1083	Dorchester County, MD, City of Alexandria, VA
124	1084	Dorchester County, MD, City of Alexandria, VA
125	1085	Anne Arundel County, MD, Fauquier County, VA
126	1086	Anne Arundel County, MD, Fauquier County, VA
127	1087	Anne Arundel County, MD, Fauquier County, VA
128	1088	Anne Arundel County, MD, Fauquier County, VA

129	1089	Garrett County, MD, Harford County, MD, Wicomico County, MD, Fairfax County, VA
130	1090	Garrett County, MD, Harford County, MD, Wicomico County, MD, Fairfax County, VA
131	1091	Garrett County, MD, Harford County, MD, Wicomico County, MD, Fairfax County, VA
132	1092	Garrett County, MD, Harford County, MD, Wicomico County, MD, Fairfax County, VA
133	1093	St. Mary's County, MD, Washington County, MD
134	1094	St. Mary's County, MD, Washington County, MD
135	1095	St. Mary's County, MD, Washington County, MD
136	1096	St. Mary's County, MD, Washington County, MD
137	1097	Montgomery County, MD
138	1098	Montgomery County, MD
139	1099	Montgomery County, MD
140	1100	Montgomery County, MD
141	1101	Undesignated and reserved
142	1102	Undesignated and reserved
143	1103	Designated for nationwide interoperability and use
144	1104	Designated for nationwide interoperability and use
145	1105	State channel
146	1106	State channel
147	1107	State channel
148	1108	State channel
149	1109	State channel
150	1110	State channel
151	1111	State channel
152	1112	State channel
153	1113	State channel
154	1114	State channel
155	1115	State channel
156	1116	State channel
157	1117	Undesignated and reserved
158	1118	Undesignated and reserved
159	1119	Designated for nationwide interoperability and use
160	1120	Designated for nationwide interoperability and use
161	1121	Prince George’s County, MD
162	1122	Prince George’s County, MD
163	1123	Prince George’s County, MD
164	1124	Prince George’s County, MD
165	1125	City of Baltimore, MD, Dorchester County, MD, Loudoun County
166	1126	City of Baltimore, MD, Dorchester County, MD, Loudoun County
167	1127	City of Baltimore, MD, Dorchester County, MD, Loudoun County
168	1128	City of Baltimore, MD, Dorchester County, MD, Loudoun County
169	1129	Worcester County, MD, Prince George’s County, MD
170	1130	Worcester County, MD, Prince George’s County, MD
171	1131	Worcester County, MD, Prince George’s County, MD
172	1132	Worcester County, MD, Prince George’s County, MD
173	1133	City of Fairfax, VA, Kent County, MD
174	1134	City of Fairfax, VA, Kent County, MD
175	1135	City of Fairfax, VA, Kent County, MD
176	1136	City of Fairfax, VA, Kent County, MD
177	1137	District of Columbia, Wicomico County, MD

178	1138	District of Columbia, Wicomico County, MD
179	1139	District of Columbia, Wicomico County, MD
180	1140	District of Columbia, Wicomico County, MD
181	1141	Reserved for secondary trunking
182	1142	Reserved for secondary trunking
183	1143	Designated for nationwide interoperability and use; Narrowband trunking
184	1144	Designated for nationwide interoperability and use; Narrowband trunking
185	1145	State channel
186	1146	State channel
187	1147	State channel
188	1148	State channel
189	1149	State channel
190	1150	State channel
191	1151	State channel
192	1152	State channel
193	1153	State channel
194	1154	State channel
195	1155	State channel
196	1156	State channel
197	1157	Undesignated and reserved
198	1158	Undesignated and reserved
199	1159	Designated for nationwide interoperability and use
200	1160	Designated for nationwide interoperability and use
201	1161	Prince George's County, MD
202	1162	Prince George's County, MD
203	1163	Prince George's County, MD
204	1164	Prince George's County, MD
205	1165	Baltimore County, MD, Somerset County, MD
206	1166	Baltimore County, MD, Somerset County, MD
207	1167	Baltimore County, MD, Somerset County, MD
208	1168	Baltimore County, MD, Somerset County, MD
209	1169	Caroline County, MD, Montgomery County, MD
210	1170	Caroline County, MD, Montgomery County, MD
211	1171	Caroline County, MD, Montgomery County, MD
212	1172	Caroline County, MD, Montgomery County, MD
213	1173	City of Baltimore, MD, Charles County, MD
214	1174	City of Baltimore, MD, Charles County, MD
215	1175	City of Baltimore, MD, Charles County, MD
216	1176	City of Baltimore, MD, Charles County, MD
217	1177	Kent County, MD, Wicomico County, MD
218	1178	Kent County, MD, Wicomico County, MD
219	1179	Kent County, MD, Wicomico County, MD
220	1180	Kent County, MD, Wicomico County, MD
221	1181	Undesignated and reserved
222	1182	Undesignated and reserved
223	1183	Designated for nationwide interoperability and use
224	1184	Designated for nationwide interoperability and use
225	1185	State channel
226	1186	State channel

227	1187	State channel
228	1188	State channel
229	1189	State channel
230	1190	State channel
231	1191	State channel
232	1192	State channel
233	1193	State channel
234	1194	State channel
235	1195	State channel
236	1196	State channel
237	1197	Undesignated and reserved
238	1198	Undesignated and reserved
239	1199	Designated for nationwide interoperability and use
240	1200	Designated for nationwide interoperability and use
241	1201	Fairfax County, VA
242	1202	Fairfax County, VA
243	1203	Fairfax County, VA
244	1204	Fairfax County, VA
245	1205	Howard County, MD, St. Mary's County, MD
246	1206	Howard County, MD, St. Mary's County, MD
247	1207	Howard County, MD, St. Mary's County, MD
248	1208	Howard County, MD, St. Mary's County, MD
249	1209	Cecil County, MD, City of Manassas, VA
250	1210	Cecil County, MD, City of Manassas, VA
251	1211	Cecil County, MD, City of Manassas, VA
252	1212	Cecil County, MD, City of Manassas, VA
253	1213	Baltimore County, MD, Worcester County, MD
254	1214	Baltimore County, MD, Worcester County, MD
255	1215	Baltimore County, MD, Worcester County, MD
256	1216	Baltimore County, MD, Worcester County, MD
257	1217	District of Columbia
258	1218	District of Columbia
259	1219	District of Columbia
260	1220	District of Columbia
261	1221	Reserved for secondary trunking
262	1222	Reserved for secondary trunking
263	1223	Designated for nationwide interoperability and use; Narrowband trunking
264	1224	Designated for nationwide interoperability and use; Narrowband trunking
265	1225	State channel
266	1226	State channel
267	1227	State channel
268	1228	State channel
269	1229	State channel
270	1230	State channel
271	1231	State channel
272	1232	State channel
273	1233	State channel
274	1234	State channel
275	1235	State channel

276	1236	State channel
277	1237	Undesignated and reserved
278	1238	Undesignated and reserved
279	1239	Designated for nationwide interoperability and use; Data transmission only
280	1240	Designated for nationwide interoperability and use; Data transmission only
281	1241	Anne Arundel County, MD, Wicomico County, MD
282	1242	Anne Arundel County, MD, Wicomico County, MD
283	1243	Anne Arundel County, MD, Wicomico County, MD
284	1244	Anne Arundel County, MD, Wicomico County, MD
285	1245	Talbot County, MD, Fairfax County, VA
286	1246	Talbot County, MD, Fairfax County, VA
287	1247	Talbot County, MD, Fairfax County, VA
288	1248	Talbot County, MD, Fairfax County, VA
289	1249	Allegany County, MD, City of Baltimore, MD
290	1250	Allegany County, MD, City of Baltimore, MD
291	1251	Allegany County, MD, City of Baltimore, MD
292	1252	Allegany County, MD, City of Baltimore, MD
293	1253	Frederick County, MD
294	1254	Frederick County, MD
295	1255	Frederick County, MD
296	1256	Frederick County, MD
297	1257	Prince George's County, MD, Worcester County, MD
298	1258	Prince George's County, MD, Worcester County, MD
299	1259	Prince George's County, MD, Worcester County, MD
300	1260	Prince George's County, MD, Worcester County, MD
301	1261	Undesignated and reserved
302	1262	Undesignated and reserved
303	1263	Designated for nationwide interoperability and use
304	1264	Designated for nationwide interoperability and use
305	1265	State channel
306	1266	State channel
307	1267	State channel
308	1268	State channel
309	1269	State channel
310	1270	State channel
311	1271	State channel
312	1272	State channel
313	1273	State channel
314	1274	State channel
315	1275	State channel
316	1276	State channel
317	1277	Undesignated and reserved
318	1278	Undesignated and reserved
319	1279	Designated for nationwide interoperability and use
320	1280	Designated for nationwide interoperability and use
321	1281	Caroline County, MD, City of Alexandria, VA
322	1282	Caroline County, MD, City of Alexandria, VA
323	1283	Caroline County, MD, City of Alexandria, VA
324	1284	Caroline County, MD, City of Alexandria, VA

325	1285	St. Mary's County, MD, Loudoun County, VA
326	1286	St. Mary's County, MD, Loudoun County, VA
327	1287	St. Mary's County, MD, Loudoun County, VA
328	1288	St. Mary's County, MD, Loudoun County, VA
329	1289	Kent County, MD, Wicomico County, MD, City of Manassas Park, VA
330	1290	Kent County, MD, Wicomico County, MD, City of Manassas Park, VA
331	1291	Kent County, MD, Wicomico County, MD, City of Manassas Park, VA
332	1292	Kent County, MD, Wicomico County, MD, City of Manassas Park, VA
333	1293	City of Baltimore, MD
334	1294	City of Baltimore, MD
335	1295	City of Baltimore, MD
336	1296	City of Baltimore, MD
337	1297	Allegany County, MD, Arlington County, VA
338	1298	Allegany County, MD, Arlington County, VA
339	1299	Allegany County, MD, Arlington County, VA
340	1300	Allegany County, MD, Arlington County, VA
341	1301	Anne Arundel County, MD
342	1302	Anne Arundel County, MD
343	1303	Anne Arundel County, MD
344	1304	Anne Arundel County, MD
345	1305	Frederick County, MD, Talbot County, MD
346	1306	Frederick County, MD, Talbot County, MD
347	1307	Frederick County, MD, Talbot County, MD
348	1308	Frederick County, MD, Talbot County, MD
349	1309	City of Fairfax, VA
350	1310	City of Fairfax, VA
351	1311	City of Fairfax, VA
352	1312	City of Fairfax, VA
353	1313	Dorchester County, MD, Garrett County, MD, Howard County, MD
354	1314	Dorchester County, MD, Garrett County, MD, Howard County, MD
355	1315	Dorchester County, MD, Garrett County, MD, Howard County, MD
356	1316	Dorchester County, MD, Garrett County, MD, Howard County, MD
357	1317	Harford County, MD, Worcester County, MD, Fairfax County, VA
358	1318	Harford County, MD, Worcester County, MD, Fairfax County, VA
359	1319	Harford County, MD, Worcester County, MD, Fairfax County, VA
360	1320	Harford County, MD, Worcester County, MD, Fairfax County, VA
361	1321	Calvert County, MD, Washington County, MD
362	1322	Calvert County, MD, Washington County, MD
363	1323	Calvert County, MD, Washington County, MD
364	1324	Calvert County, MD, Washington County, MD
365	1325	Montgomery County, MD
366	1326	Montgomery County, MD
367	1327	Montgomery County, MD
368	1328	Montgomery County, MD
369	1329	Queen Anne's County, Somerset County, MD, Prince William County, VA
370	1330	Queen Anne's County, Somerset County, MD, Prince William County, VA
371	1331	Queen Anne's County, Somerset County, MD, Prince William County, VA
372	1332	Queen Anne's County, Somerset County, MD, Prince William County, VA
373	1333	City of Baltimore, MD

374	1334	City of Baltimore, MD
375	1335	City of Baltimore, MD
376	1336	City of Baltimore, MD
377	1337	Prince George's County, MD
378	1338	Prince George's County, MD
379	1339	Prince George's County, MD
380	1340	Prince George's County, MD
381	1341	Loudoun County, VA
382	1342	Loudoun County, VA
383	1343	Loudoun County, VA
384	1344	Loudoun County, VA
385	1345	District of Columbia
386	1346	District of Columbia
387	1347	District of Columbia
388	1348	District of Columbia
389	1349	Unassigned
390	1350	Unassigned
391	1351	Unassigned
392	1352	Unassigned
393	1353	Anne Arundel County, MD, Wicomico County, MD, Fauquier County, VA
394	1354	Anne Arundel County, MD, Wicomico County, MD, Fauquier County, VA
395	1355	Anne Arundel County, MD, Wicomico County, MD, Fauquier County, VA
396	1356	Anne Arundel County, MD, Wicomico County, MD, Fauquier County, VA
397	1357	Harford County, MD, Fairfax County, VA
398	1358	Harford County, MD, Fairfax County, VA
399	1359	Harford County, MD, Fairfax County, VA
400	1360	Harford County, MD, Fairfax County, VA
401	1361	Dorchester County, MD, Howard County, MD
402	1362	Dorchester County, MD, Howard County, MD
403	1363	Dorchester County, MD, Howard County, MD
404	1364	Dorchester County, MD, Howard County, MD
405	1365	Worcester County, MD, Prince George’s County, MD
406	1366	Worcester County, MD, Prince George’s County, MD
407	1367	Worcester County, MD, Prince George’s County, MD
408	1368	Worcester County, MD, Prince George’s County. MD
409	1369	Caroline County, MD, Washington County, MD
410	1370	Caroline County, MD, Washington County, MD
411	1371	Caroline County, MD, Washington County, MD
412	1372	Caroline County, MD, Washington County, MD
413	1373	Montgomery County, MD
414	1374	Montgomery County, MD
415	1375	Montgomery County, MD
416	1376	Montgomery County, MD
417	1377	City of Baltimore, MD, Stafford County, VA
418	1378	City of Baltimore, MD, Stafford County, VA
419	1379	City of Baltimore, MD, Stafford County, VA
420	1380	City of Baltimore, MD, Stafford County, VA
421	1381	Somerset County, MD, Arlington County, VA
422	1382	Somerset County, MD, Arlington County, VA

423	1383	Somerset County, MD, Arlington County, VA
424	1384	Somerset County, MD, Arlington County, VA
425	1385	Kent County, MD, St. Mary's County, MD, Loudoun County, VA
426	1386	Kent County, MD, St. Mary's County, MD, Loudoun County, VA
427	1387	Kent County, MD, St. Mary's County, MD, Loudoun County, VA
428	1388	Kent County, MD, St. Mary's County, MD, Loudoun County, VA
429	1389	Carroll County, MD, Stafford County, VA
430	1390	Carroll County, MD, Stafford County, VA
431	1391	Carroll County, MD, Stafford County, VA
432	1392	Carroll County, MD, Stafford County, VA
433	1393	Queen Anne's County
434	1394	Queen Anne's County
435	1395	Queen Anne's County
436	1396	Queen Anne's County
437	1397	Allegany County, MD, Wicomico County, MD, Prince George’s County
438	1398	Allegany County, MD, Wicomico County, MD, Prince George’s County
439	1399	Allegany County, MD, Wicomico County, MD, Prince George’s County
440	1400	Allegany County, MD, Wicomico County, MD, Prince George’s County
441	1401	Prince George's County, MD
442	1402	Prince George's County, MD
443	1403	Prince George's County, MD
444	1404	Prince George's County, MD
445	1405	City of Manassas, VA
446	1406	City of Manassas, VA
447	1407	City of Manassas, VA
448	1408	City of Manassas, VA
449	1409	Anne Arundel County, MD
450	1410	Anne Arundel County, MD
451	1411	Anne Arundel County, MD
452	1412	Anne Arundel County, MD
453	1413	District of Columbia, Dorchester County, MD
454	1414	District of Columbia, Dorchester County, MD
455	1415	District of Columbia, Dorchester County, MD
456	1416	District of Columbia, Dorchester County, MD
457	1417	Baltimore County, MD, Worcester County, MD, Prince William County, VA
458	1418	Baltimore County, MD, Worcester County, MD, Prince William County, VA
459	1419	Baltimore County, MD, Worcester County, MD, Prince William County, VA
460	1420	Baltimore County, MD, Worcester County, MD, Prince William County, VA
461	1421	Garrett County, MD, Montgomery County, MD, Talbot County, MD
462	1422	Garrett County, MD, Montgomery County, MD, Talbot County, MD
463	1423	Garrett County, MD, Montgomery County, MD, Talbot County, MD
464	1424	Garrett County, MD, Montgomery County, MD, Talbot County, MD
465	1425	City of Baltimore, MD
466	1426	City of Baltimore, MD
467	1427	City of Baltimore, MD
468	1428	City of Baltimore, MD
469	1429	Somerset County, MD, City of Alexandria, VA
470	1430	Somerset County, MD, City of Alexandria, VA
471	1431	Somerset County, MD, City of Alexandria, VA

472	1432	Somerset County, MD, City of Alexandria, VA
473	1433	Howard County, MD
474	1434	Howard County, MD
475	1435	Howard County, MD
476	1436	Howard County, MD
477	1437	Allegany County, MD, Wicomico County, MD, Fairfax County, VA
478	1438	Allegany County, MD, Wicomico County, MD, Fairfax County, VA
479	1439	Allegany County, MD, Wicomico County, MD, Fairfax County, VA
480	1440	Allegany County, MD, Wicomico County, MD, Fairfax County, VA
481	1441	Caroline County, MD, Arlington County, MD
482	1442	Caroline County, MD, Arlington County, MD
483	1443	Caroline County, MD, Arlington County, MD
484	1444	Caroline County, MD, Arlington County, MD
485	1445	Frederick County, MD, Garrett County, MD
486	1446	Frederick County, MD, Garrett County, MD
487	1447	Frederick County, MD, Garrett County, MD
488	1448	Frederick County, MD, Garrett County, MD
489	1449	Prince George's County, MD
490	1450	Prince George's County, MD
491	1451	Prince George's County, MD
492	1452	Prince George's County, MD
493	1453	Cecil County, MD, Dorchester County, MD
494	1454	Cecil County, MD, Dorchester County, MD
495	1455	Cecil County, MD, Dorchester County, MD
496	1456	Cecil County, MD, Dorchester County, MD
497	1457	Allegany County, MD, Worcester County, MD
498	1458	Allegany County, MD, Worcester County, MD
499	1459	Allegany County, MD, Worcester County, MD
500	1460	Allegany County, MD, Worcester County, MD
501	1461	Anne Arundel County, MD
502	1462	Anne Arundel County, MD
503	1463	Anne Arundel County, MD
504	1464	Anne Arundel County, MD
505	1465	Harford County, MD, Fairfax County, VA
506	1466	Harford County, MD, Fairfax County, VA
507	1467	Harford County, MD, Fairfax County, VA
508	1468	Harford County, MD, Fairfax County, VA
509	1469	Calvert County, MD
510	1470	Calvert County, MD
511	1471	Calvert County, MD
512	1472	Calvert County, MD
513	1473	Baltimore County, MD, Somerset County, MD, Prince William County, VA
514	1474	Baltimore County, MD, Somerset County, MD, Prince William County, VA
515	1475	Baltimore County, MD, Somerset County, MD, Prince William County, VA
516	1476	Baltimore County, MD, Somerset County, MD, Prince William County, VA
517	1477	Montgomery County, MD
518	1478	Montgomery County, MD
519	1479	Montgomery County, MD
520	1480	Montgomery County, MD

521	1481	City of Baltimore, MD, Charles County, MD
522	1482	City of Baltimore, MD, Charles County, MD
523	1483	City of Baltimore, MD, Charles County, MD
524	1484	City of Baltimore, MD, Charles County, MD
525	1485	Kent County, MD, Arlington County, VA
526	1486	Kent County, MD, Arlington County, VA
527	1487	Kent County, MD, Arlington County, VA
528	1488	Kent County, MD, Arlington County, VA
529	1489	Wicomico County, MD, Stafford County, VA
530	1490	Wicomico County, MD, Stafford County, VA
531	1491	Wicomico County, MD, Stafford County, VA
532	1492	Wicomico County, MD, Stafford County, VA
533	1493	Carroll County, MD, Queen Anne's County, MD
534	1494	Carroll County, MD, Queen Anne's County, MD
535	1495	Carroll County, MD, Queen Anne's County, MD
536	1496	Carroll County, MD, Queen Anne's County, MD
537	1497	City of Alexandria, VA
538	1498	City of Alexandria, VA
539	1499	City of Alexandria, VA
540	1500	City of Alexandria, VA
541	1501	Caroline County, MD, Garrett County, MD, Howard County, MD
542	1502	Caroline County, MD, Garrett County, MD, Howard County, MD
543	1503	Caroline County, MD, Garrett County, MD, Howard County, MD
544	1504	Caroline County, MD, Garrett County, MD, Howard County, MD
545	1505	Cecil County, MD, Fairfax County, VA
546	1506	Cecil County, MD, Fairfax County, VA
547	1507	Cecil County, MD, Fairfax County, VA
548	1508	Cecil County, MD, Fairfax County, VA
549	1509	Anne Arundel County, MD, Worcester County, MD
550	1510	Anne Arundel County, MD, Worcester County, MD
551	1511	Anne Arundel County, MD, Worcester County, MD
552	1512	Anne Arundel County, MD, Worcester County, MD
553	1513	Harford County, MD, Prince William County, VA
554	1514	Harford County, MD, Prince William County, VA
555	1515	Harford County, MD, Prince William County, VA
556	1516	Harford County, MD, Prince William County, VA
557	1517	Prince George's County, MD
558	1518	Prince George's County, MD
559	1519	Prince George's County, MD
560	1520	Prince George's County, MD
561	1521	City of Baltimore, MD, Stafford County
562	1522	City of Baltimore, MD, Stafford County
563	1523	City of Baltimore, MD, Stafford County
564	1524	City of Baltimore, MD, Stafford County
565	1525	Loudoun County, VA
566	1526	Loudoun County, VA
567	1527	Loudoun County, VA
568	1528	Loudoun County, VA
569	1529	District of Columbia, Wicomico County, MD

570	1530	District of Columbia, Wicomico County, MD
571	1531	District of Columbia, Wicomico County, MD
572	1532	District of Columbia, Wicomico County, MD
573	1533	Calvert County, MD, Fauquier County
574	1534	Calvert County, MD, Fauquier County
575	1535	Calvert County, MD, Fauquier County
576	1536	Calvert County, MD, Fauquier County
577	1537	Montgomery County, MD
578	1538	Montgomery County, MD
579	1539	Montgomery County, MD
580	1540	Montgomery County, MD
581	1541	Caroline County, MD, Charles County, MD
582	1542	Caroline County, MD, Charles County, MD
583	1543	Caroline County, MD, Charles County, MD
584	1544	Caroline County, MD, Charles County, MD
585	1545	Frederick County, MD
586	1546	Frederick County, MD
587	1547	Frederick County, MD
588	1548	Frederick County, MD
589	1549	Cecil County, MD, Dorchester County, MD
590	1550	Cecil County, MD, Dorchester County, MD
591	1551	Cecil County, MD, Dorchester County, MD
592	1552	Cecil County, MD, Dorchester County, MD
593	1553	Worcester County, MD, Prince George’s County, MD
594	1554	Worcester County, MD, Prince George’s County, MD
595	1555	Worcester County, MD, Prince George’s County, MD
596	1556	Worcester County, MD, Prince George’s County, MD
597	1557	Harford County, MD, Prince William County, VA
598	1558	Harford County, MD, Prince William County, VA
599	1559	Harford County, MD, Prince William County, VA
600	1560	Harford County, MD, Prince William County, VA
601	1561	Allegany County, MD, Howard County, MD, St. Mary's County, MD
602	1562	Allegany County, MD, Howard County, MD, St. Mary's County, MD
603	1563	Allegany County, MD, Howard County, MD, St. Mary's County, MD
604	1564	Allegany County, MD, Howard County, MD, St. Mary's County, MD
605	1565	Queen Anne's County, MD, Somerset County, MD
606	1566	Queen Anne's County, MD, Somerset County, MD
607	1567	Queen Anne's County, MD, Somerset County, MD
608	1568	Queen Anne's County, MD, Somerset County, MD
609	1569	Baltimore County, MD, City of Manassas Park, VA
610	1570	Baltimore County, MD, City of Manassas Park, VA
611	1571	Baltimore County, MD, City of Manassas Park, VA
612	1572	Baltimore County, MD, City of Manassas Park, VA
613	1573	District of Columbia, Garrett County, MD, Wicomico County, MD
614	1574	District of Columbia, Garrett County, MD, Wicomico County, MD
615	1575	District of Columbia, Garrett County, MD, Wicomico County, MD
616	1576	District of Columbia, Garrett County, MD, Wicomico County, MD
617	1577	Carroll County, MD, Talbot County, MD, Stafford County, VA
618	1578	Carroll County, MD, Talbot County, MD, Stafford County, VA

619	1579	Carroll County, MD, Talbot County, MD, Stafford County, VA
620	1580	Carroll County, MD, Talbot County, MD, Stafford County, VA
621	1581	Prince George's County, MD
622	1582	Prince George's County, MD
623	1583	Prince George's County, MD
624	1584	Prince George's County, MD
625	1585	Unassigned
626	1586	Unassigned
627	1587	Unassigned
628	1588	Unassigned
629	1589	Anne Arundel County, MD, Fauquier County, VA
630	1590	Anne Arundel County, MD, Fauquier County, VA
631	1591	Anne Arundel County, MD, Fauquier County, VA
632	1592	Anne Arundel County, MD, Fauquier County, VA
633	1593	Caroline County, MD, Fairfax County, VA
634	1594	Caroline County, MD, Fairfax County, VA
635	1595	Caroline County, MD, Fairfax County, VA
636	1596	Caroline County, MD, Fairfax County, VA
637	1597	Calvert County, MD, Cecil County, MD, Washington County, MD
638	1598	Calvert County, MD, Cecil County, MD, Washington County, MD
639	1599	Calvert County, MD, Cecil County, MD, Washington County, MD
640	1600	Calvert County, MD, Cecil County, MD, Washington County, MD
641	1601	Designated for nationwide interoperability and use
642	1602	Designated for nationwide interoperability and use
643	1603	Undesignated and reserved
644	1604	Undesignated and reserved
645	1605	State Channel
646	1606	State Channel
647	1607	State Channel
648	1608	State Channel
649	1609	State Channel
650	1610	State Channel
651	1611	State Channel
652	1612	State Channel
653	1613	State Channel
654	1614	State Channel
655	1615	State Channel
656	1616	State Channel
657	1617	Designated for nationwide interoperability and use; Narrowband Trunking
658	1618	Designated for nationwide interoperability and use; Narrowband Trunking
659	1619	Reserved for secondary trunking
660	1620	Reserved for secondary trunking
661	1621	Prince George's County, MD
662	1622	Prince George's County, MD
663	1623	Prince George's County, MD
664	1624	Prince George's County, MD
665	1625	Baltimore County, MD, City of Falls Church, VA
666	1626	Baltimore County, MD, City of Falls Church, VA
667	1627	Baltimore County, MD, City of Falls Church, VA

668	1628	Baltimore County, MD, City of Falls Church, VA
669	1629	District of Columbia
670	1630	District of Columbia
671	1631	District of Columbia
672	1632	District of Columbia
673	1633	Wicomico County, MD, Loudoun County, VA
674	1634	Wicomico County, MD, Loudoun County, VA
675	1635	Wicomico County, MD, Loudoun County, VA
676	1636	Wicomico County, MD, Loudoun County, VA
677	1637	Prince George's County, MD
678	1638	Prince George's County, MD
679	1639	Prince George's County, MD
680	1640	Prince George's County, MD
681	1641	Designated for nationwide interoperability and use; Narrowband calling
682	1642	Designated for nationwide interoperability and use; Narrowband calling
683	1643	Undesignated and reserved
684	1644	Undesignated and reserved
685	1645	State Channel
686	1646	State Channel
687	1647	State Channel
688	1648	State Channel
689	1649	State Channel
690	1650	State Channel
691	1651	State Channel
692	1652	State Channel
693	1653	State Channel
694	1654	State Channel
695	1655	State Channel
696	1656	State Channel
697	1657	Designated for nationwide interoperability and use
698	1658	Designated for nationwide interoperability and use
699	1659	Undesignated and reserved
700	1660	Undesignated and reserved
701	1661	Howard County, MD, St. Mary's County, MD
702	1662	Howard County, MD, St. Mary's County, MD
703	1663	Howard County, MD, St. Mary's County, MD
704	1664	Howard County, MD, St. Mary's County, MD
705	1665	Caroline County, MD, Fairfax County, VA
706	1666	Caroline County, MD, Fairfax County, VA
707	1667	Caroline County, MD, Fairfax County, VA
708	1668	Caroline County, MD, Fairfax County, VA
709	1669	City of Baltimore, MD
710	1670	City of Baltimore, MD
711	1671	City of Baltimore, MD
712	1672	City of Baltimore, MD
713	1673	Montgomery County, MD
714	1674	Montgomery County, MD
715	1675	Montgomery County, MD
716	1676	Montgomery County, MD

717	1677	Charles County, MD, Somerset County, MD, Washington County, MD
718	1678	Charles County, MD, Somerset County, MD, Washington County, MD
719	1679	Charles County, MD, Somerset County, MD, Washington County, MD
720	1680	Charles County, MD, Somerset County, MD, Washington County, MD
721	1681	Designated for nationwide interoperability and use
722	1682	Designated for nationwide interoperability and use
723	1683	Undesignated and reserved
724	1684	Undesignated and reserved
725	1685	State Channel
726	1686	State Channel
727	1687	State Channel
728	1688	State Channel
729	1689	State Channel
730	1690	State Channel
731	1691	State Channel
732	1692	State Channel
733	1693	State Channel
734	1694	State Channel
735	1695	State Channel
736	1696	State Channel
737	1697	Designated for nationwide interoperability and use; Narrowband Trunking
738	1698	Designated for nationwide interoperability and use; Narrowband Trunking
739	1699	Reserved for secondary trunking
740	1700	Reserved for secondary trunking
741	1701	Prince George's County, MD, Wicomico County, MD
742	1702	Prince George's County, MD, Wicomico County, MD
743	1703	Prince George's County, MD, Wicomico County, MD
744	1704	Prince George's County, MD, Wicomico County, MD
745	1705	Baltimore County, MD, Garrett County, MD
746	1706	Baltimore County, MD, Garrett County, MD
747	1707	Baltimore County, MD, Garrett County, MD
748	1708	Baltimore County, MD, Garrett County, MD
749	1709	Fairfax County, VA
750	1710	Fairfax County, VA
751	1711	Fairfax County, VA
752	1712	Fairfax County, VA
753	1713	City of Baltimore, MD, St. Mary's County, MD
754	1714	City of Baltimore, MD, St. Mary's County, MD
755	1715	City of Baltimore, MD, St. Mary's County, MD
756	1716	City of Baltimore, MD, St. Mary's County, MD
757	1717	Montgomery County, MD, Somerset County, MD
758	1718	Montgomery County, MD, Somerset County, MD
759	1719	Montgomery County, MD, Somerset County, MD
760	1720	Montgomery County, MD, Somerset County, MD
761	1721	Designated for nationwide interoperability and use
762	1722	Designated for nationwide interoperability and use
763	1723	Undesignated and reserved
764	1724	Undesignated and reserved
765	1725	State Channel

766	1726	State Channel
767	1727	State Channel
768	1728	State Channel
769	1729	State Channel
770	1730	State Channel
771	1731	State Channel
772	1732	State Channel
773	1733	State Channel
774	1734	State Channel
775	1735	State Channel
776	1736	State Channel
777	1737	Designated for nationwide interoperability and use
778	1738	Designated for nationwide interoperability and use
779	1739	Undesignated and reserved
780	1740	Undesignated and reserved
781	1741	Prince George's County
782	1742	Prince George's County
783	1743	Prince George's County
784	1744	Prince George's County
785	1745	Allegany County, MD
786	1746	Allegany County, MD
787	1747	Allegany County, MD
788	1748	Allegany County, MD
789	1749	District of Columbia, Dorchester County, MD
790	1750	District of Columbia, Dorchester County, MD
791	1751	District of Columbia, Dorchester County, MD
792	1752	District of Columbia, Dorchester County, MD
793	1753	Prince William County, VA
794	1754	Prince William County, VA
795	1755	Prince William County, VA
796	1756	Prince William County, VA
797	1757	Montgomery County, MD
798	1758	Montgomery County, MD
799	1759	Montgomery County, MD
800	1760	Montgomery County, MD
801	1761	Designated for nationwide interoperability and use
802	1762	Designated for nationwide interoperability and use
803	1763	Undesignated and reserved
804	1764	Undesignated and reserved
805	1765	State Channel
806	1766	State Channel
807	1767	State Channel
808	1768	State Channel
809	1769	State Channel
810	1770	State Channel
811	1771	State Channel
812	1772	State Channel
813	1773	State Channel
814	1774	State Channel

815	1775	State Channel
816	1776	State Channel
817	1777	Designated for nationwide interoperability and use; Narrowband Trunking
818	1778	Designated for nationwide interoperability and use; Narrowband Trunking
819	1779	Reserved for secondary trunking
820	1780	Reserved for secondary trunking
821	1781	Anne Arundel County, MD
822	1782	Anne Arundel County, MD
823	1783	Anne Arundel County, MD
824	1784	Anne Arundel County, MD
825	1785	Worcester County, MD
826	1786	Worcester County, MD
827	1787	Worcester County, MD
828	1788	Worcester County, MD
829	1789	City of Baltimore, MD, Dorchester County, MD, Stafford County, VA
830	1790	City of Baltimore, MD, Dorchester County, MD, Stafford County, VA
831	1791	City of Baltimore, MD, Dorchester County, MD, Stafford County, VA
832	1792	City of Baltimore, MD, Dorchester County, MD, Stafford County, VA
833	1793	Prince George's County, MD
834	1794	Prince George's County, MD
835	1795	Prince George's County, MD
836	1796	Prince George's County, MD
837	1797	Baltimore County, MD, Wicomico County, MD, Fauquier County, VA
838	1798	Baltimore County, MD, Wicomico County, MD, Fauquier County, VA
839	1799	Baltimore County, MD, Wicomico County, MD, Fauquier County, VA
840	1800	Baltimore County, MD, Wicomico County, MD, Fauquier County, VA
841	1801	Designated for nationwide interoperability and use
842	1802	Designated for nationwide interoperability and use
843	1803	Undesignated and reserved
844	1804	Undesignated and reserved
845	1805	State Channel
846	1806	State Channel
847	1807	State Channel
848	1808	State Channel
849	1809	State Channel
850	1810	State Channel
851	1811	State Channel
852	1812	State Channel
853	1813	State Channel
854	1814	State Channel
855	1815	State Channel
856	1816	State Channel
857	1817	Designated for nationwide interoperability and use
858	1818	Designated for nationwide interoperability and use
859	1819	Undesignated and reserved
860	1820	Undesignated and reserved
861	1821	Fairfax County, VA
862	1822	Fairfax County, VA
863	1823	Fairfax County, VA

864	1824	Fairfax County, VA
865	1825	Calvert County, MD, Frederick County, MD
866	1826	Calvert County, MD, Frederick County, MD
867	1827	Calvert County, MD, Frederick County, MD
868	1828	Calvert County, MD, Frederick County, MD
869	1829	City of Baltimore, MD, Worcester County, MD, City of Falls Church, VA
870	1830	City of Baltimore, MD, Worcester County, MD, City of Falls Church, VA
871	1831	City of Baltimore, MD, Worcester County, MD, City of Falls Church, VA
872	1832	City of Baltimore, MD, Worcester County, MD, City of Falls Church, VA
873	1833	Allegany County, MD, Talbot County, MD, Prince William County, VA
874	1834	Allegany County, MD, Talbot County, MD, Prince William County, VA
875	1835	Allegany County, MD, Talbot County, MD, Prince William County, VA
876	1836	Allegany County, MD, Talbot County, MD, Prince William County, VA
877	1837	Montgomery County, MD
878	1838	Montgomery County, MD
879	1839	Montgomery County, MD
880	1840	Montgomery County, MD
881	1841	Designated for nationwide interoperability and use
882	1842	Designated for nationwide interoperability and use
883	1843	Undesignated and reserved
884	1844	Undesignated and reserved
885	1845	State Channel
886	1846	State Channel
887	1847	State Channel
888	1848	State Channel
889	1849	State Channel
890	1850	State Channel
891	1851	State Channel
892	1852	State Channel
893	1853	State Channel
894	1854	State Channel
895	1855	State Channel
896	1856	State Channel
897	1857	Designated for nationwide interoperability and use; Narrowband Trunking
898	1858	Designated for nationwide interoperability and use; Narrowband Trunking
899	1859	Reserved for secondary trunking
900	1860	Reserved for secondary trunking
901	1861	Fairfax County, VA
902	1862	Fairfax County, VA
903	1863	Fairfax County, VA
904	1864	Fairfax County, VA
905	1865	Carroll County, MD, Queen Anne's County, MD, Somerset County, MD
906	1866	Carroll County, MD, Queen Anne's County, MD, Somerset County, MD
907	1867	Carroll County, MD, Queen Anne's County, MD, Somerset County, MD
908	1868	Carroll County, MD, Queen Anne's County, MD, Somerset County, MD
909	1869	Prince George's County, MD
910	1870	Prince George's County, MD
911	1871	Prince George's County, MD
912	1872	Prince George's County, MD

913	1873	City of Baltimore, MD, Wicomico County, MD, Prince William County, VA
914	1874	City of Baltimore, MD, Wicomico County, MD, Prince William County, VA
915	1875	City of Baltimore, MD, Wicomico County, MD, Prince William County, VA
916	1876	City of Baltimore, MD, Wicomico County, MD, Prince William County, VA
917	1877	Montgomery County, MD
918	1878	Montgomery County, MD
919	1879	Montgomery County, MD
920	1880	Montgomery County, MD
921	1881	Designated for nationwide interoperability and use; Data transmission only
922	1882	Designated for nationwide interoperability and use; Data transmission only
923	1883	Undesignated and reserved
924	1884	Undesignated and reserved
925	1885	State Channel
926	1886	State Channel
927	1887	State Channel
928	1888	State Channel
929	1889	State Channel
930	1890	State Channel
931	1891	State Channel
932	1892	State Channel
933	1893	State Channel
934	1894	State Channel
935	1895	State Channel
936	1896	State Channel
937	1897	Designated for nationwide interoperability and use
938	1898	Designated for nationwide interoperability and use
939	1899	Undesignated and reserved
940	1900	Undesignated and reserved
941	1901	Calvert County, MD, Frederick County, MD
942	1902	Calvert County, MD, Frederick County, MD
943	1903	Calvert County, MD, Frederick County, MD
944	1904	Calvert County, MD, Frederick County, MD
945	1905	Fairfax County, VA
946	1906	Fairfax County, VA
947	1907	Fairfax County, VA
948	1908	Fairfax County, VA
949	1909	Low power not to exceed 2 watts - Generic public safety use
950	1910	Low power not to exceed 2 watts - Generic public safety use
951	1911	Low power not to exceed 2 watts - Generic public safety use
952	1912	Low power not to exceed 2 watts - Generic public safety use
953	1913	Low power not to exceed 2 watts - Law enforcement use
954	1914	Low power not to exceed 2 watts - Law enforcement use
955	1915	Low power not to exceed 2 watts - Law enforcement use
956	1916	Low power not to exceed 2 watts - Law enforcement use
957	1917	Low power not to exceed 2 watts - Multidisciplinary public safety
958	1918	Low power not to exceed 2 watts - Multidisciplinary public safety
959	1919	Low power not to exceed 2 watts; Itinerant use
960	1920	Low power not to exceed 2 watts; Itinerant use

Appendix H - SAMPLE NOTIFICATIONS BY RPC TO SECONDARY TV STATIONS

NOTIFICATION OF COMMENCEMENT OF PLANNING PROCESS

WZDC-TV
Onida Capital, Inc.
2000 N. 14th Street Suite 400
Arlington, VA 22201

To Whom It May Concern:

This letter serves as formal notification of the commencement of the 700 MHz Regional Planning process for the District of Columbia, State of Maryland, and Northern Virginia. By this letter, WZDC-TV, channel 64, is put on notice that its operations are secondary to future, primary public safety land mobile operations. Low power TV stations and TV translators may not cause interference to public safety operations and must accept any interference they might receive from those operations.[13] You will be notified when Region 20's 700 MHz Plan has been approved by the FCC and again as public safety systems begin to be implemented in the band.

Sincerely,

G. Edward Ryan, II, Chairperson of Region 20
Department of Natural Resources
580 Taylor Avenue, E-4
Annapolis, MD 21401
P: 410-260-8734
F: 410-260-8377
E: gryan@dnr.state.md.us

[13] The Report and Order on ET Docket No. 97-157 (FCC 97-421) for the "Reallocation of Television Channels 60-69, the 746-806 MHz Band," clearly defined Land Mobile operations as a "primary service" and that Low power TV and TV translator operations are secondary to all primary services in this band (see paragraghs 14 and 25-31).

List of Television Stations Affected by Region 20 700 MHz Plan

Low-power stations and others that must operate on a secondary non-interfering basis to public safety are printed in red.

State	County	Channel	Call Sign	Location	Latitude NAD83	Longitude NAD83
DC	District of Columbia	64	WZDC-LP	Washington	38°57'44"N	77°1'36"W
MD	Anne Arundel County	63	WWTD-LP	Annapolis	38°59'13"N	76°33'12"W
	Baltimore County	63	W28BY	Baltimore	39°17'21"N	76°36'52"W
		67	WMPB	Baltimore	39°26'53"N	76°46'51"W
		69	WQAW-LP	Salisbury	39°15'18.3~	76°40'32"W
	Dorchester County	69	WQAW-LP	Salisbury	38°37'27.5~	75°53'20.2"W
	Frederick County	62	WFPT	Frederick	39°15'37.62	77°18'44.65"
	Queen Anne's County	69	WQAW-LP	Salisbury	38°37'27.5"	75°53'20.2"W
	Washington County	68	WJAL	Hagerstown	39°53'31"N	77°58'2"W
	Wicomico County	67	W67EA	Salisbury	38°23'9"N	75°35'32"W
		69	WQAW-LP	Salisbury	38°23'49"N	75°38'49"W
	Worcester County	63	W63DC	Ocean City	38°18'15"N	75°12'15"W
		65	W65EF	Ocean City	38°18'15"N	75°12'15"W
		69	NEW	Ocean City	38°22'58"N	75°10'34"W
		69	WQAW-LP	Salisbury	38°23'49"N	75°38'49"W
VA	Stafford County	69	960920IL	Fredericksburg	38°17'4"N	77°35'41"W

Appendix I – DTV Transition Procedures

DIGITAL TELEVISION (DTV) TRANSITION
Frequency Availability Through the DTV Transition

On August 14, 1996, the FCC released a *Sixth Further Notice of Proposed Rule Making* in the digital television (DTV) proceeding. A portion of the spectrum recovered from TV channels 60-69 when DTV is fully deployed "could be used to meet public safety needs."[1] By Congressional direction in the Balanced Budget Act of 1997, the FCC reallocated 24 MHz of spectrum to Public Safety services in the ***763-775 MHz and 793-805***[14] MHz bands. The statute required the FCC to establish service rules, by September 30, 1998, in order to start the process of assigning licenses. The rules that the FCC established by September 30, 1998, "provided the minimum technical framework necessary to standardize operations in this spectrum band, including, but not limited to: (a) establishing interference limits at the boundaries of the spectrum block and service areas; (b) establishing technical restrictions necessary to protect full-service analog and digital television service during the transition to digital television services; (c) permitting public safety licensees the flexibility to aggregate multiple licenses to create larger spectrum blocks and service areas, and to disaggregate or partition licenses to create smaller spectrum blocks or service areas; and (d) ensuring that the new spectrum will not be subject to harmful interference from television broadcast licensees" [2].

In April 1997, the FCC assigned a second 6 MHz block of spectrum to each license (or permit to construct) holders of full power, analog, television broadcast station (NTSC) in order to construct a digital television station (DTV). Secondary low power television stations (LPTV), secondary translators and boosters (TX), mutually exclusive applications for new stations, and application filed after a cut-off date did not receive a second 6 MHz allotment for DTV. The FCC established about a 10 year timeline for those stations with a DTV assignment to construct a DTV station, cease NTSC transmissions, and return one of the two 6 MHz blocks of spectrum to the FCC. Target date for the end of analog television (NTSC) transmission was set for December 31, 2006.

Congress provided several market penetration loopholes (>85% households served, all 4 major networks converted, etc) allowing NTSC operations to continue past the December 31, 2006 date. While there are over 100 NTSC full power stations in this band, there are also about 12 DTV assignments. The DTV assignments might continue operations past the December 31, 2006 date for two reasons.

1) They must find a suitable channel below channel 60 to move to, which may be their own NTSC assignment. They may not be able to find another allocation until other NTSC stations have ceased operations and returned a channel below 60 to the FCC.

[1] Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, MM Docket No. 87-268, *Sixth Further Notice of Proposed Rule Making*, 11 FCC Rcd 10,968, 10,980 (1996) (*DTV Sixth Notice*).

[2] FCC 98-191, 1st R&O and 3rd NPRM on WT Docket No. 96-86 Operational & Technical Requirements or the 700 MHz Public Safety Band, para.4.

[14] Amended pursuant to 2nd Report and Order, Docket WT 96-86

2) their license does not expire until after 2006 (most are licensed into 2007 or 2008).

Protection of Public Safety From Future TV/DTV Stations

Public safety base and mobile operations must have a safe distance between the co-channel or adjacent TV and DTV systems. This typically means that a co-channel and adjacent channel base and mobile system cannot operate in areas where TV stations already exist. The public safety systems that will operate in the 700 MHz band for some locations in the U.S. and its possessions must wait until the transition period is over and the TV/DTV stations have moved to other channels before beginning operations. In other areas, channels will be available for public safety operations. During the transition period, public safety stations must be acutely aware of the TV allocations for both TV and DTV stations. The FCC wants the number of situations where the public safety licensee has to coordinate its station with the existing TV stations kept to a minimum. The Commission's decisions in the reallocation of spectrum to DTV implemented two requirements which will help public safety systems to protect TV/DTV stations and reduce the number of coordinations. The first requirement is that full power UHF-TV stations can no longer apply for channels 60-69 or modifications in channels 60-69 that would increase the stations' service areas, which creates a known environment for public safety licensees.[3] The second requirement is that since only existing TV station licensees can apply for DTV channels, the applicants and their proposed locations are already known.[4]

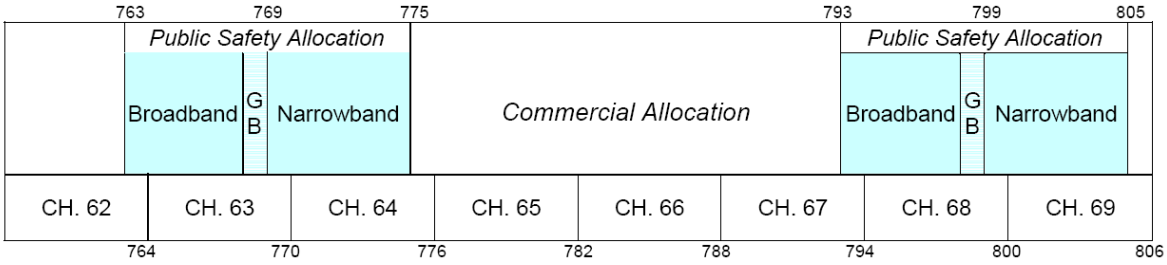
STATE	CITY	NTSC TV Ch.	DTV Ch.	ERP (kW)	HAAT (m)
California	Stockton	64	62	63.5	874
California	Los Angeles	11	65	688.7	896
California	Riverside	62	68	180.1	723
California	Concord	42	63	61.0	856
Pennsylvania	Allentown	39	62	50.0	302
Pennsylvania	Philadelphia	6	64	1000.0	332
Pennsylvania	Philadelphia	10	67	791.8	354
Puerto Rico	Aguada	50	62	50.0	343
Puerto Rico	Mayaguez	16	63	50.0	347
Puerto Rico	Naranjito	64	65	50.0	142
Puerto Rico	Aguadilla	12	69	691.8	665

[3] *See Reallocation Report and Order*, 12 FCC Rcd 22,969-22,970. Stations with existing channel 60-69 TV construction permits must complete their stations and file for a license by January 2, 2001.

[4] *See DTV Sixth Report and Order*, 12 FCC Rcd 14,739-14,754; *See also* In the Matter of Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order* in MM Docket No. 87-268, 13 FCC Rcd 7418 (1998). The 11 DTV allotments are:

Also, the low power TV stations and translators already on channels 60-69 are secondary and must cease operations if they cause harmful interference when a primary service, like land mobile, comes into operation. The secondary Low Power TV stations already on channels 60-69 cannot apply for the new Class A protection status.

Revised 700 MHz Band Plan for Public Safety Services



The FCC designated ***769-775*** MHz (TV Channels 63 and 64) for base-to-mobile transmissions and ***799-805*** MHz (TV Channels 68 and 69) for mobile-to-base communications. In addition, base transmit channels in TV Channel 63 are paired with mobile channels in TV Channel 68 and likewise that base channels in TV Channel 64 are paired with mobile channels in TV Channel 69. This provides 30 MHz separation between base and mobile transmit channel center frequencies. This band plan was suggested because of the close proximity of TV Channels 68 and 69 to the 806-824 MHz band, which already contains the transmit channels for mobile and portable radios (base receive).

Mobile transmissions are allowed on any part of the 700 MHz band, not just the upper 12 MHz. This will facilitate direct mobile-to-mobile communications (*i.e.*, not through a repeater) that are often employed at the site of an incident, where wide area communications facilities are not available or desired. Allowing mobile transmissions on both halves of a paired channel is generally consistent with FCC rules governing use of other public safety bands.

Non-uniform TV Channel Pairing

There are currently geographical areas where, either licensed or otherwise protected full-service analog or new digital, television stations are currently authorized to operate on TV Channels 62, 63, 64, 65, 67, 68, and 69.[5] During the DTV transition period, an incumbent TV station occupying one or more of the four Public Safety channels (63, 64, 68, 69) or the three adjacent channels (62, 65, 67) may preclude pairing of the channels in accordance with the band plan defined above. Therefore, to provide for cases where standard pairing is not practicable during the DTV transition period, the FCC will allow the RPCs to consider pairing base-to-mobile channels in TV Channel 63 with mobile-to-base channels in TV Channel 69 and/or base-to-mobile channels in TV Channel 64 with mobile-to-base channels in TV Channel 68. Because such non-standard channel pairing may cause problems when the band becomes more fully occupied, the FCC expects the RPCs to permit such non-standard channel pairing only when absolutely necessary, and the FCC may require stations to return to standard channel pairing after the DTV transition period is over. However, the FCC will not permit non-standard channel pairing on the nationwide interoperability channels in the 700 MHz band because of the need for nationwide uniformity of these channels.

At least three issues must be considered before deciding upon non-uniform channel pairing:

1) Preliminary analysis, looking at current incumbent TV stations, shows few geographic areas where non-uniform pairing allows early implementation of 700 MHz systems. As DTV Transition progresses and TV stations vacate the band, this situation might change.

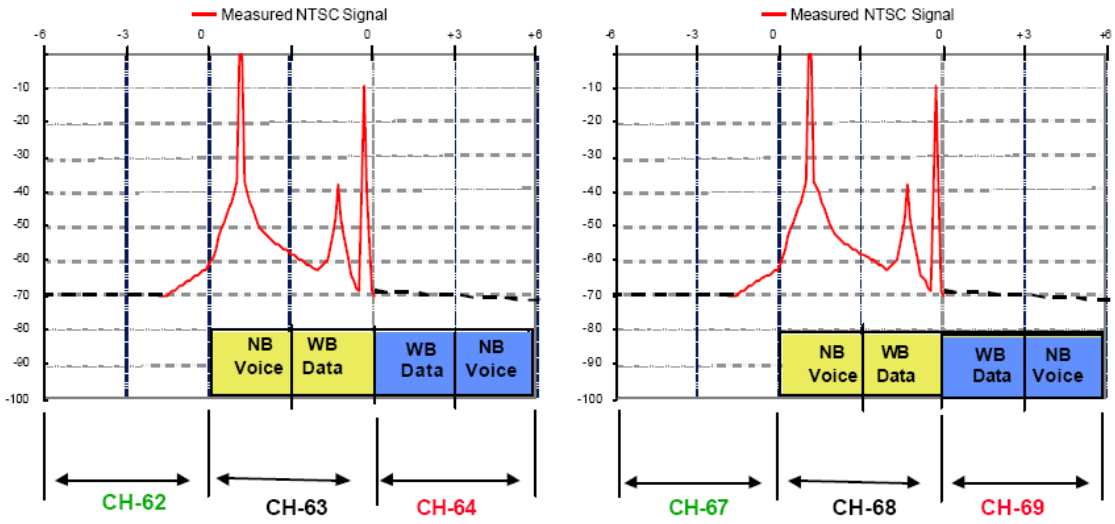
2) If interoperability channels must be uniform, operation on I/O channels will be blocked until all incumbent TV stations are cleared, even though General Use channels may be implemented earlier.

~~3) If I/O channels must follow uniform pairing, and general use & reserve channels can be implemented using non-uniform pairing, narrowband voice subscriber equipment must operate on 3 different channel pairings – 39 MHz (764-767 paired with 803-806 MHz), 30 MHz, and 21 MHz (773-776 paired with 794-797 MHz). Likewise, there will be 3 different channel pairing for wideband channels. No vendors have volunteered to build equipment & systems for non-uniform pairing, yet.~~

TV/DTV Protection

During the DTV Transition period, public safety must consider all co-channel and adjacent channel TV and DTV stations within about a 160 mile radius. For public safety channel pair 63/68, public safety must consider six TV/DTV channels - co-channels 63 and 68, as well as adjacent channels 62, 64, 67, and 69.

Measured (off-the-air) Analog TV Signal
vs
700 MHz Public Safety Assignments

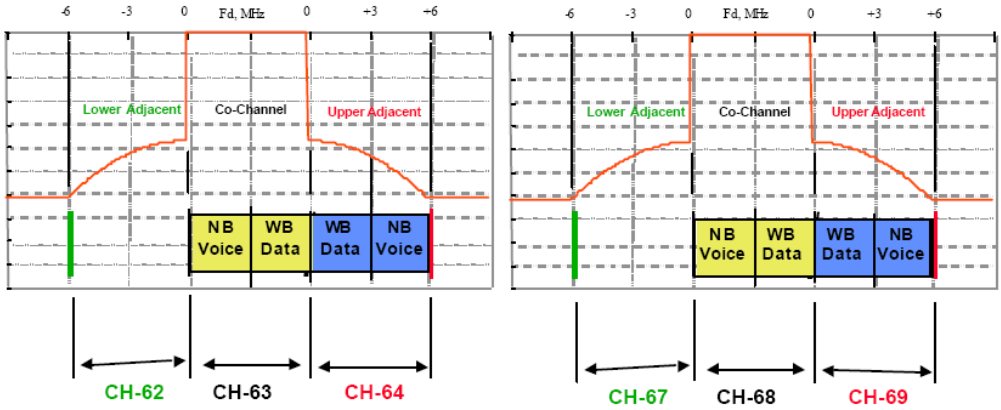


Fixed Transmit,
Mobile Talk-around Transmit,
&
Control Station & Mobile Receive

Fixed Receive
&
Control Station & Mobile Transmit

HAVE 2 CO-CHANNEL AND 4 ADJACENT CHANNELS
TO CONSIDER FOR EACH 700 MHz PAIRED BLOCKS OF SPECTRUM

DTV Emission Mask
vs
700 MHz Public Safety Assignments



Fixed Transmit,
Mobile Talk-around Transmit,
&
Control Station & Mobile Receive

Fixed Receive
&
Control Station & Mobile Transmit

HAVE 2 CO-CHANNEL AND 4 ADJACENT CHANNELS
TO CONSIDER FOR EACH 700 MHz PAIRED BLOCKS OF SPECTRUM

For public safety channel pair 64/69, public safety must consider five TV/DTV channels; co-channels 64 and 69, as well as, adjacent channels 63, 65, and 68. It may only take one TV/DTV station to block operations on one, the other, or both public safety channel pairs. For a public safety system at 500 watts ERP and 500 ft HAAT, co-channel TV stations can block a 120 mile radius and adjacent channel TV/DTV stations can block a 90 mile radius.

Since base stations transmitters are located only on channels 63 and 64, LMR mobile only TV/DTV protection spacing on channels 68 and 69 may be shorter than LMR base TV/DTV protection on channels 63 & 64.

TV/DTV Protection Criteria

Public safety applicants can select one of three ways to meet the TV/DTV protection requirements:

(1) utilize the geographic separation specified in the 40 dB Tables of 90.309;
(2) submit an engineering study to justify other separations which the Commission approves; or
(3) obtain concurrence from the applicable TV/DTV station(s).

90.309 40 dB D/U Tables

The FCC adopted a 40 dB desired (TV/DTV) to undesired (LMR) signal ratio for co-channel operations and a 0 dB desired/undesired (D/U) signal ratio for adjacent channel operations. The D/U ratio is used to determine the geographic separation needed between public safety base stations and the Grade B service contours of co-channel and adjacent channel TV/DTV stations.[6] The D/U signal ratio is used to determine the level of land mobile signals that can be permitted at protected fringe area TV receiver locations without degrading the TV picture to less than a defined picture quality. In other words, the D/U signal ratio indicates what relative levels of TV and land mobile signals can be tolerated without causing excessive interference to TV reception at the fringe of the TV service area.

Desired and undesired contours are not quite the same thing. Desired analog TV contours are defined as F(50,50), meaning coverage is 50% of the places and 50% of the time. Undesired land mobile or interference contours are defined as F(50,10). For Digital TV, the desired contours are defined as F(50,90), while the undesired land mobile contour are still F(50,10).

Land mobile and analog TV services have successfully shared the 470-512 MHz band (TV Channels 14-20) within a 50 mile radius of eleven major cities since the early 1970's based upon providing a signal ratio of at least 50 dB[7] between the desired TV signal and undesired co-channel land mobile signal (D/U signal ratio) at a hypothetical 88.5 km (55 mi) Grade B service contour and an adjacent channel D/U signal ratio of 0 dB at the same hypothetical Grade B service contour. These separation distances also protected the land mobile systems from interference from the TV stations. In 1985, recognizing that 50 dB D/U was too conservative, the

[6] *See Second Notice*, 12 FCC Rcd 17,803.

[7] For TV Channel 15 in New York City, a 40 dB D/U signal ratio is used. *See* 47 C.F.R. §§ 90.307(b) and 90.309 (Table B). A 50 dB protection ratio means that the amplitude of the desired TV signal is more than 300 times greater than the amplitude of the undesired signal at the Grade B service contour. A 40 dB protection ratio means the desired TV signal is 100 times greater.

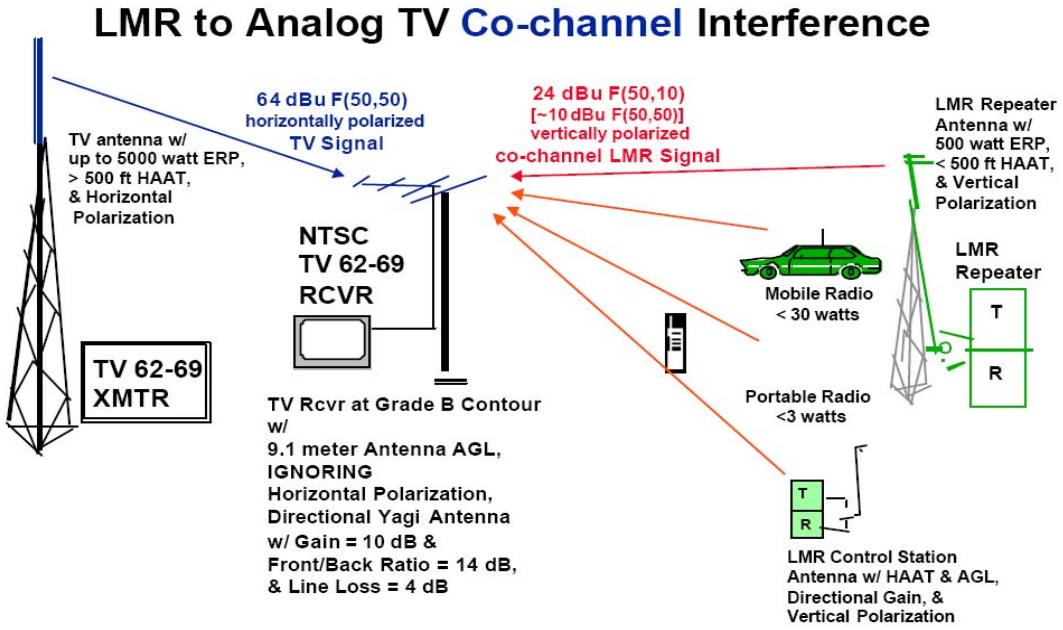
FCC proposed to expand land mobile/TV

sharing to other TV channels and proposed that the geographic separation requirements for co-channel operations be based on a D/U signal ratio of 40 dB rather than 50 dB.[8] That proceeding was put on hold pending completion of the DTV proceeding, which has now been completed. In the 470-512 MHz band, the FCC also relied on minimum separation distances based on the various heights and powers of the land mobile stations (HAAT/ERP separation tables) to prevent harmful interference.

Since this simple, yet conservative, method was successful, the FCC decided to use this same method, the 90.309 HAAT/ERP Separation Tables, to administer LMR to TV/DTV receiver protection criteria for the services in the 700 MHz band.

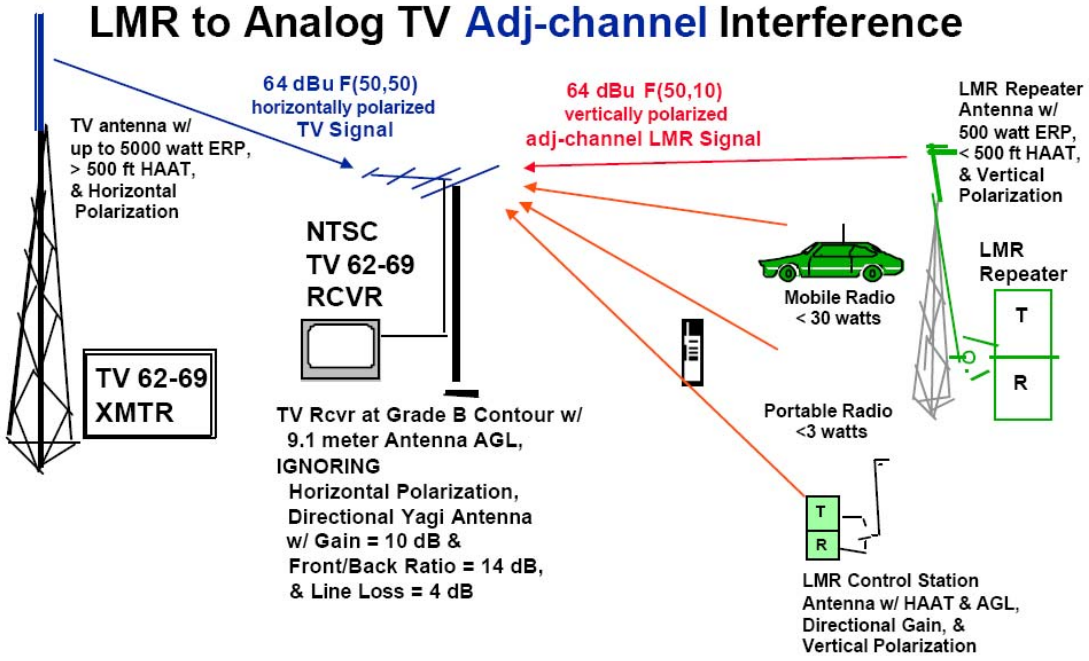
Co-channel land mobile base station transmitters are limited to a maximum signal strength at the hypothetical TV Grade B contour 40 dB D/U below desired 64 dBu F(50,50) analog TV signal level, or 24 dBu F(50,10).[9] The FCC adopted a 0 dB D/U signal ratio for adjacent channel operations.

Adjacent channel land mobile transmitters will be limited to a maximum signal of 64 dBu F(50,10) which is 0 dB D/U below the TV Grade B signal of 64 dBu F(50,50) at the TV station Grade B contour of 88.5 km (55 miles). A typical TV receiver's adjacent channel rejection is at least 10-20 dB greater than this level which will further safeguards TV receivers from land mobile interference.



[8] *See* Amendment of the Rules Concerning Further Sharing of the UHF Television Band by Private Land Mobile Radio Services, GEN Docket No. 85-172, *Notice of Proposed Rulemaking*, 101 FCC 2d 852, 861 (1985) (*UHF-TV Sharing NPRM*).

[9] In terms of miles, if everything else is the same, a 40 dB D/U ratio rather than a 50 dB D/U ratio allows base stations to be located approximately 48.3 km (30 mi) closer to a co-channel TV station. *See* 47 C.F.R. § 90.309, Tables
A & B.



The equivalent ratios for a DTV station's 41 dB F(50,90) desired field strength contour are land mobile 17 dB F(50,10) contour for co-channel and land mobile - 23 dB F(50,10) contour for adjacent channel.

The Tables to protect TV/DTV stations are found in Section 90.309 of the Commission's rules. These existing Tables cover co-channel protection based on a 40 dB D/U ratio using the separation methods described in Section 73.611 of the Commission's rules for base, control, and mobile stations, and for adjacent channel stations for base stations based on a 0 dB D/U ratio.

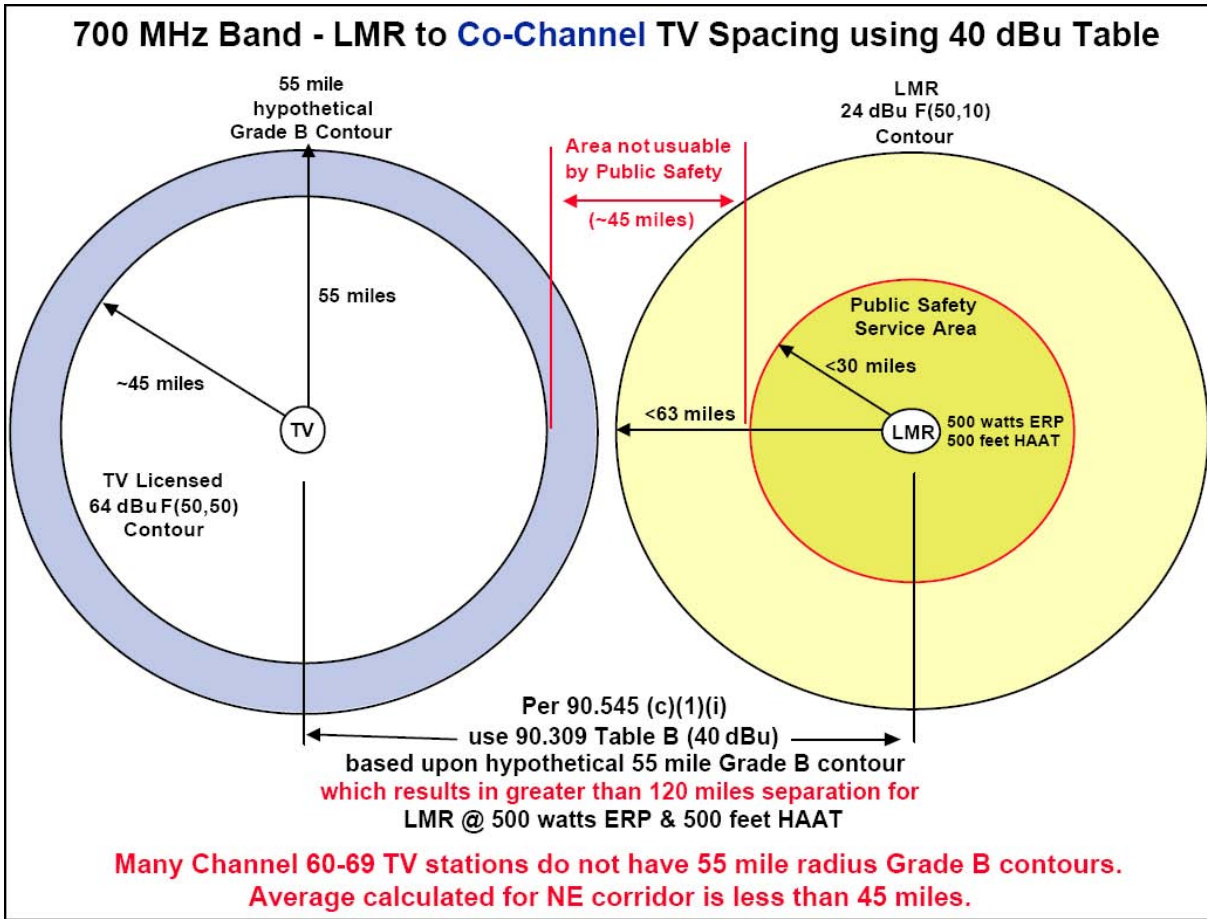
However, the original considerations in 470-512 MHz band under Section 90.309 were different in that mobiles were limited in their roaming distance from the base station (less than 30 miles) and mobiles were on the same TV channel as the base station.

Control and mobile stations (including portables) are limited in height (200 ft for control stations, 20 ft for mobiles/portables) and power (200 watts ERP for control stations, 30 watts for mobiles, 3 watts for portables). Mobiles and control stations shall afford protection to co-channel and adjacent channel TV/DTV stations in accordance with the values specified in Table D (co-channel frequencies based on 40 dB protection for TV and 17 dB for DTV) in § 90.309.

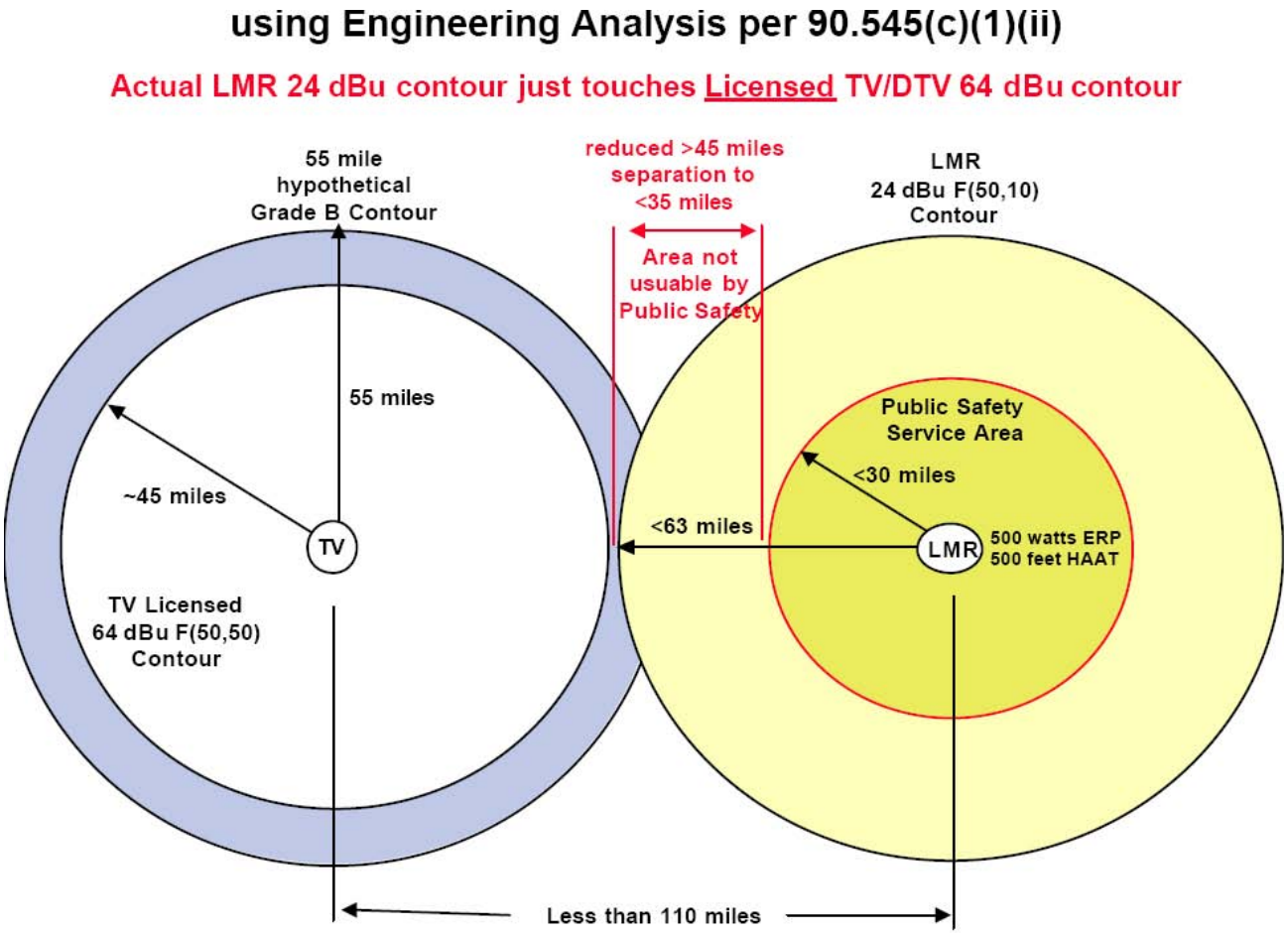
Control stations and mobiles/portables shall keep a minimum distance of 8 kilometers (5 miles) from all adjacent channel TV/DTV station hypothetical or equivalent Grade B contours (adjacent channel frequencies based on 0 dB protection for TV and -23 dB for DTV). This means that control and mobile stations shall keep a minimum distance of 96.5 kilometers (60 miles) from all adjacent channel TV/DTV stations. Since operators of mobiles and portables are able to move and communicate with each other, licensees or coordinators must determine the areas where the mobiles can and cannot roam in order to protect the TV/DTV stations, and advise the mobile operators of these areas and their restrictions.

Engineering Analysis

Limiting TV/land mobile separation to distances specified in the 40 dB HAAT/ERP Separation Tables found in 90.309 may prevent public safety entities from fully utilizing this spectrum in a number of major metropolitan areas until after the DTV transition period ends. Public safety applicants will be allowed to submit engineering studies showing how they propose to meet the appropriate D/U signal ratio at the existing TV station's authorized or applied for Grade B service contour or equivalent contour for DTV stations instead of the hypothetical contour at 88.5 km.



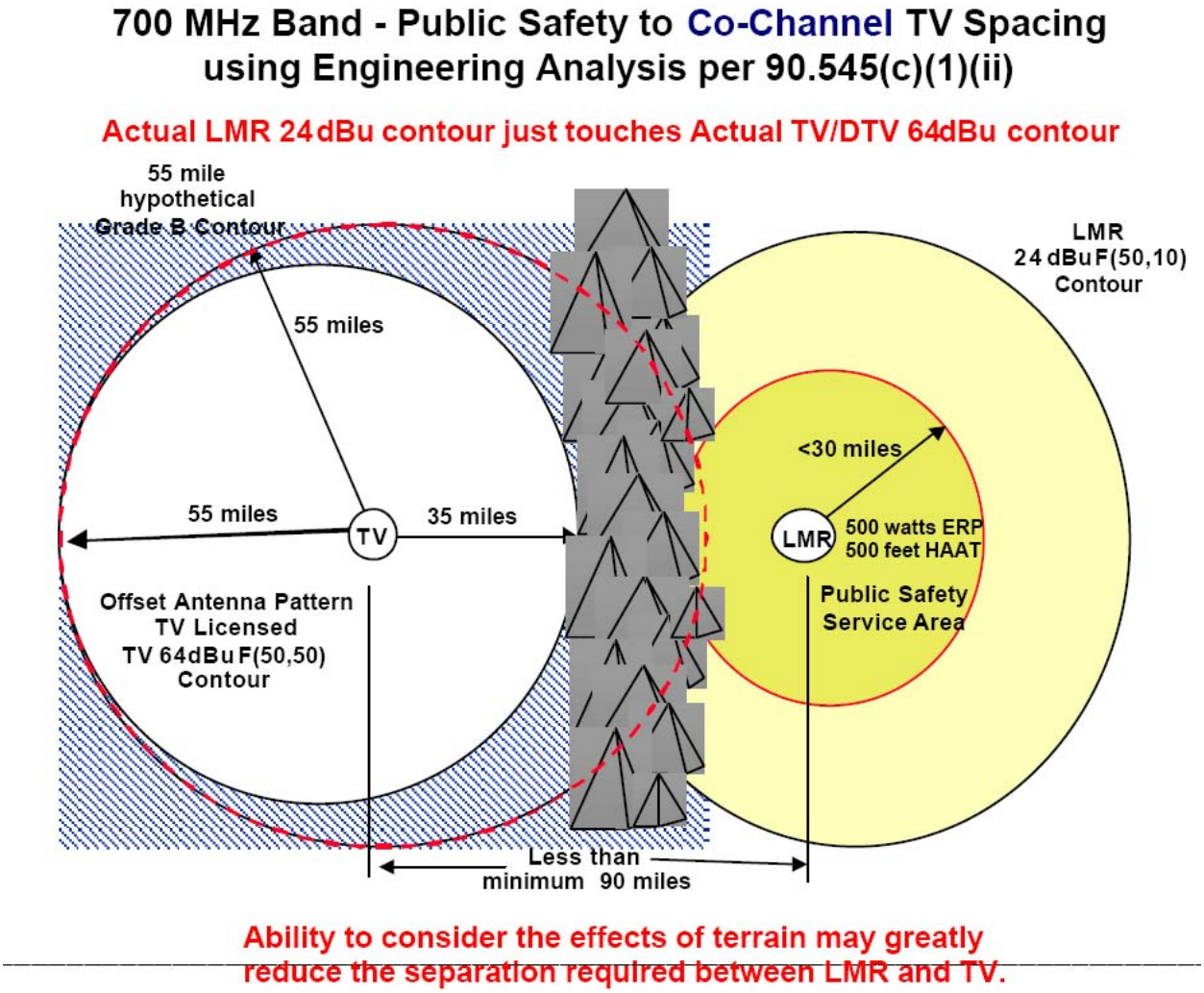
This would permit public safety applicants to take into account intervening terrain and engineering techniques such as directional and down-tilt antennas in determining the necessary separation to provide the required protection. Public safety applicants who use the engineering techniques must consider the actual TV/DTV parameters and not base their study on the 88.5 km hypothetical or equivalent Grade B contour. If land mobile interference contour does not overlap the TV Grade B contour (or DTV equivalent), then engineering analysis may be submitted to the FCC with the application.



This method is most useful with lower power TV stations whose Grade B contours are much smaller than the hypothetical 55 mile (88.5 km) Grade B contour or have directional patterns.

Note that 200 ft AGL limitations on 700 MHz control stations is much higher than the 100 ft AGL limitation used at UHF. Limiting control station antenna height and/or ERP may greatly reduce land mobile to TV contour spacing. Also, note that analysis for TV/DTV receivers uses 30 ft (10 m) antenna height whereas, analysis for land mobile subscribers uses about a 6 ft (2m) antenna height.

TV/DTV Short-spacing



Public safety applicants will also be allowed to "short-space" even closer if they get the (written) approval of the TV stations they are required to protect. Public safety applicants need to determine the station's intended market area vs. its hypothetical Grade B contour area. Alternately, the TV/DTV station may be short-spaced against another TV/DTV station, limiting their area of operation, but does not affect LMR operations.

Instead of each agency negotiating with a TV/DTV station individually, they may want to combine into a single group or committee and negotiate together.

TV/DTV Height Adjustment Factor

In order to protect certain TV/DTV stations which have extremely large contours due to unusual height situations, such as a television station mounted on top of Mount Wilson near Los Angeles, California, the FCC incorporated an additional height adjustment factor which must be used by all public safety base, control and mobile stations to protect these few TV/DTV stations and afford the land mobile stations the necessary protection from the TV/DTV stations. The equation

necessary to calculate the additional distance from the hypothetical or equivalent Grade B contour is found in the rules section 90.545(c)(2)(iii).

CANADIAN AND MEXICAN BORDER REGIONS

The FCC typically takes one of two approaches. They either postpone licensing of land mobile stations within a certain geographic distance (e.g., 120 km (75 miles)) of Canada and Mexico, or permit interim authorizations conditioned on the outcome of future agreements. Because international negotiations can take many months or even years to finalize, the FCC took the later approach and adopted certain interim requirements for public safety licenses along the Canada and Mexico borders, providing that the licenses are subject to whatever future agreements the United States develops with the two countries.

Nevertheless, existing mutual agreements with Canada and Mexico for the use of these bands for UHF television must be recognized until further negotiations are completed. The United States negotiated an agreement with Mexico for DTV operations near the US/Mexican border in July 1998. The U.S. just negotiated an agreement with Mexico for DTV operations, and limited non-broadcast operations on 746-806 MHz, near the US/Canadian border in September 2000. Current agreements recognize existing TV and/or DTV allotments and planning factors within a specified distance of the border. The Canadian Letter of Understanding also acknowledges that the U.S. plans to use 746-806 MHz for non broadcast purposes and provides planning criteria (40 dB D/U) to protect Canadian TV/DTV receivers.

Additionally, public safety facilities within the United States must accept interference from authorized channel 60-69 TV transmitters in Canada and Mexico in accordance with the existing agreements. Since the locations of the Canadian and Mexican analog TV assignments and DTV allotments are known, the public safety applicants can consider the levels of harmful interference to expect from Canadian and Mexican TV/DTV stations when applying for a license. Both Canada and Mexico have been informally notified that the Commission has changed its allocated use of TV channels 60-69, and the Commission will discuss the possibility of mutually compatible spectrum use with Canada and Mexico.

Appendix J – Dispute Resolution

INTRODUCTION

The Regional Committee is established under 47 CFR §90.527 of the FCC's rules and regulations which came into effect on June 22, 2001. It is an independent Committee apart from the Federal Communications Commission with authority to evaluate application for public safety uses of the spectrum allocated under FCC Docket 96-86. In addition, appeals from decisions made with respect to a variety of matters regulated by the Regional Committee will be heard. The formal requirements of the appeal process are set out below.

In order to ensure that the appeal process is open and understandable to the public, the Regional Committee has developed this procedure. Those involved in the appeal process can expect the Committee and its members to follow the procedures (as may be amended from time to time). Where any matter arises during the course of an appeal that is not dealt with in this document, the Committee will do whatever is necessary to enable it to adjudicate fairly, effectively and completely on the appeal. In addition, the Committee may dispense with compliance with any part or all of a particular procedure where it is appropriate in the circumstances. As the Committee gains experience, it will refine and, if necessary, change its policies. Any changes made to the procedure will require a modification to the Regional Plan and will be made available to the public.

The Regional Committee will make every effort to process appeals in a timely fashion and issue decisions expeditiously.

Appeals Committee

Members

The Regional Chair may organize the Committee into Sub-Committees, each comprised of one or more members, the Appeals Sub-Committee is one of those Sub-Committees.

Where an appeal is scheduled to be heard by this Sub-Committee the chair is determined as follows:

(a) if the chair of the Committee is on the Sub-Committee, he/she will be the chair;

(b) if the chair of the Committee is not on the Sub-Committee but the vice-chair is, the vice-chair will be the chair; and

(c) if neither the chair nor the vice-chair is on the Sub-Committee, the Regional Committee will designate one of the members to be the chair.

Withdrawal or Disqualification of a Committee Member on the Grounds of Bias

Where the chair or a Committee member becomes aware of any facts that would lead an informed person, viewing the matter reasonably and practically, to conclude that a member, whether consciously or unconsciously, would not decide a matter fairly, the member will be prohibited from conducting the appeal unless consent is obtained from all parties to continue. In

addition, any party to an appeal may challenge a member on the basis of real or a reasonable apprehension of bias.

Correspondence (Communicating) with the Committee

To ensure the appeal process is kept open and fair to the participants, any correspondence to the Regional Committee must be sent to the Chair and be copied to all other Committee members and other parties to the appeal, if applicable.

Committee members will not contact a party on any matter relevant to the merits of the appeal, unless that member puts all other parties on notice and gives them an opportunity to participate. The appeal process is public in nature and all meetings regarding the appeal will be open to the public.

THE APPEAL PROCESS

Filing an Appeal

What can be appealed

The Committee hears appeals from a determination or allocation and shall include the following: i.e. number of channels assigned, ranking in the assignment matrix, interference, or any other criteria that the region shall establish.

Who can appeal

An official of the entity who filed the original application to the Regional Committee must be the person who files the appeal on behalf of the entity.

How to appeal

A notice of appeal must be served upon the Regional Committee. The notice of appeal may be "delivered" by mail, courier, or hand delivered to the office of the Chair and Members of the Committee as listed in the Official Membership List. The Committee will also accept a notice of appeal by facsimile to the Chair and Secretary with the original copy of the notice of appeal served as indicated above.

Certain things must be included in a notice of appeal for it to be accepted. The notice of appeal **must** include:

1. The name and address of the appellant;
2. The name of the person, if any, making the request for an appeal on behalf of the appellant;
3. The address for service of the appellant;
4. The grounds for appeal (a detailed explanation of the appellant's objections to the determination - describe errors in the decision);
5. A description of the relief requested (What do you want the Committee to order at the end of the appeal?);

6. The signature of the appellant or the appellant's representative.

Time limit for filing the appeal

To appeal a determination or allocation the entity who is subject to the determination must deliver a notice of appeal **within three weeks** after receiving the decision. If a notice of appeal is not delivered within the time required, the right to an appeal is lost. However, the Committee is allowed to extend the deadline, either before or after its expiration based upon a majority plus one vote of the Committee.

Extension of time to appeal

The Committee has the discretion to extend the time to appeal either before or after the three week deadline. A request for an extension should be made to the Committee, in writing, and include the reasons for the delay in filing the notice of appeal and any other reasons which the requester believes support the granting of an extension of time to file the appeal. A request for an extension should accompany the notice of appeal.

In deciding whether to grant an extension, the Committee will consider whether fairness requires an extension. The Committee will take into account the length of the delay, the adequacy of the reasons for the delay, the prejudice to those affected by the delay and any impacts that may result from an extension. Other factors not identified could be relevant depending on the circumstances of the particular case.

Rejection of a notice of appeal

The Committee may reject a notice of appeal if:

(a) it is determined that the appellant does not have standing to appeal; or
(b) the Committee does not have jurisdiction over the subject matter or the remedy sought.

Before a notice of appeal is rejected, the Committee will inform the appellant of this in writing, with reasons, and give the appellant a three-week opportunity to make submissions and any potential parties with an opportunity to respond.

Adding parties to the appeal

In addition to the parties mentioned above, the Committee has the discretion to add any other person who may be “affected” by the appeal as a party to the appeal. Anyone wanting to obtain party status should make a written request to the Committee as early as possible. The written request should contain the following information:

a. The name, address, telephone and fax number, if any, of the person submitting the request;

b. A detailed description of how the person is “affected” by the notice of appeal and

c. The reasons why the person should be included in the appeal; and

d. The signature of the person submitting the request.

Intervener status

The Committee may also invite or permit someone to participate in a hearing as an intervener. Interveners are generally individuals or groups that do not meet the criteria to become a party (i.e. "may be affected by the appeal") but have sufficient interest in, or some relevant expertise or view in relation to the subject matter of the appeal.

Someone wanting to take part in an appeal as an intervener should send a written request to the Committee. The written request should contain the following information: (to be determined by RPC)

Prior to inviting or permitting a person to participate in a proceeding as an intervener, or deciding on the extent of that participation, the Committee will provide all parties with an opportunity to make representations if they wish to do so.

Type of appeal (written or oral) hearing

An appeal may be conducted by way of written submissions, oral hearing or a combination of both. The Committee will determine the appropriate type of appeal after a complete notice of appeal has been received.

The Committee will normally conduct an oral hearing although it may order that a hearing proceed by way of written submissions in certain cases. Where a hearing by written submissions is being considered by the Committee, the Committee may request input from the parties.

Burden of proof

The general rule is that the burden or responsibility for proving a fact is on the person who asserts it.

Notification of expert evidence

The Committee requires any party that intends to present expert evidence at a hearing to provide the Committee, and all other parties to the appeal, with reasonable advance notice that an expert will be called to give an opinion. The notice should include a brief statement of the expert's qualifications and areas of expertise.

If a party intends to produce, at a hearing, a written statement or report prepared by an expert, a copy of the statement or report should be provided to the Committee and all parties to the appeal within a reasonable time before the statement or report is given in evidence. Unless there are compelling reasons for later admission, expert reports should be distributed 30 days prior to the hearing date.

Documents

If a party will be referring to a document that was not provided to the Committee and all parties prior to the hearing, sufficient copies of the document must be brought to the hearing for the

Committee and all other parties.

APPEALING THE APPEALS SUBCOMMITTEE'S DECISION

If a party is not satisfied with the decision of the Region's Appeals Subcommittee's Decision, he or she can appeal that decision to the 700 MHz National Planning Oversight Committee.

Appendix K National Coordinating Committee "Check-off" Sheet

Regional Plan Element	Check	Rule Section
Cover letter referencing Docket # 02-378 and identifying the document as the 700 MHz Regional Plan for the Region	**Page 2**	Public Notice DA-02-3497
Name, Title, address, phone number, agency affiliation, email address of Chairperson	**Page 2**	90.527(a)(1)
Names, agency affiliations, voting status, mailing addresses, phone numbers, email addresses (if available) of other RPC officers	**Page 6**	90.527(a)(1)
A statement that at least 60 days notice was given prior to the first meeting	**Page 7**	1st R&O, FN220
A summary of the major elements of the plan and an explanation of how all eligible entities w/in the Region were given an opportunity to participate and have their positions heard and considered fairly.	**Page 7**	90.527(a)(2)
Definition of the Region and its boundaries, a list of the counties and cities within the boundaries	**Pages 9-10 Appendix C**	90.527(a)(2)
Overview of public safety entities that have jurisdiction within or over any or all portions of the Region (state agencies, federal agencies, etc.)	**Page 13**	90.527(a)(2)
Description of the types of public safety, law enforcement, government, public service, or other entities (federal, county, regional, city, town etc.) that are included in the Region.	**Page 13**	90.527(a)(2)
The dates and publications in which the meetings were announced	**Pages 11-12**	90.527(a)(2)
The dates and websites on which the meetings were announced	**Page 12**	90.527(a)(2)
A description of the process by which comments were solicited from all eligible parties	**Pages 14-15**	90.527(a)(2)
Summary of all comments and submissions obtained through the process	**Page 14**	90.527(a)(2)
A description of the process used to consider comments submitted from concerned parties	**Page 14**	90.527(a)(2)
The guidelines and procedures for operation of the RPC	**Page 14**	90.527(a)(2)
The procedures for frequency coordination	**Pages 15-20**	90.527(a)(2)
Guidelines and procedures for protection of incumbent TV/DTV stations within the Region or near the Region's border during the DTV transition period	**Pages 31-35**	90.527(a)(2)
A copy of the RPC's bylaws	**Pages 61-68**	90.527(a)(3)
The technical procedures for requesting channels	**Pages 20-21**	90.527(a)(3)
An overview of the application process	**Page 27**	90.527(a)(3)
An explanation of how the RPC decided between competing agencies when more requests for spectrum were received than could be filled. What criteria was used to evaluate competing applications to determine which request was granted?	**Pages 16-17**	90.527(a)(3)
An explanation of how the RPC decided how the spectrum would be allocated, e.g. by population; how applications were solicited, e.g. on a first-come, first-served basis or only during certain filing windows. An explanation of channel recovery methods will be applied w/in the Region.	**Pages 16-17**	90.527(a)(4)
A description of how the applications are handled and reviewed, including an explanation of how the RPC applies the evaluation criteria listed in item 3	**Pages 16-17**	90.527(a)(4)
Spectrum utilization agreements with other Regions	**Page 18**	90.527(a)(5)
If the State bears responsibility for administering the interoperability channels, the Regional Plan must indicate how the Region will interact with the SIEC or similar body. If the RPC is responsible for administering the I/O channels, see the check points below the bold type.	**Pages 53-55**	90.525(b)

Description of the pre-coordination allotment method used at the Region's borders	**N/A**	90.527(a)(5)
Concurrence from the Chairs of the adjacent Regions **OR** evidence that the RPC used the NCC Implementation Subcommittee's 'pre-planning proposal' to reserve some portion of the 700 MHz spectrum at the RPC borders for the adjacent Region(s).	**N/A**	90.527(a)(5)
If any of the adjacent Regions have not yet convened or selected a convener, the Plan must include a waiver of 90.527(a)(5)	**Pages 3-4**	90.527(a)(5)
An explanation of how the RPC encouraged spectrum re-use and promoted spectrally efficient technologies to make the most efficient use of the spectrum	**Pages 25-27**	90.527(a)(6)
An explanation of how the RPC will maintain the pre-coordination database, provide opportunities for future modifications of the plan	**Pages 56-58**	90.527(a)(7)
Inter-Regional Dispute Resolution agreements signed by the Chair of the Adjacent Region(s)	**Pages 45-48**	90.527(a)(7)
A certification by the RPC chair that all RPC meetings were open to the public	**Page 2**	90.527(a)(8)
Signature of the RPC chair		90.527(a)(8)
The following items would constitute a Section that would be required only if the RPC had assumed responsibility for administering the 700 MHz Interoperability Channels		
If the RPC bears responsibility for administering the interoperability channels, Section 9 of the Regional Plan must include: 1) a list of the interoperability channels; 2) a definition of when and where the two calling channels are to be used, including monitoring requirements; 3) description of how the interoperability channels will be deployed and used in the Region, including procedures to extract interoperability channels being used in the trunked mode when necessary; channel nomenclature, minimum channel quantity, channel access parameters; 4) priority access levels to be used on the interoperability channels	**N/A**	90.525(b)
Description of existing interoperability contracts, compacts, mutual aid agreements, etc.	**N/A**	90.525 (b)
Description of the effect of the addition of 700 MHz channels and interoperability requirements on existing plans	**N/A**	90.525(b)
Descriptions of the Region's interoperability plans and interoperability requirements	**N/A**	90.525(b)